

FINE ART

# SCHOOL ARTS



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LEMONS  
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CALIFORNIA

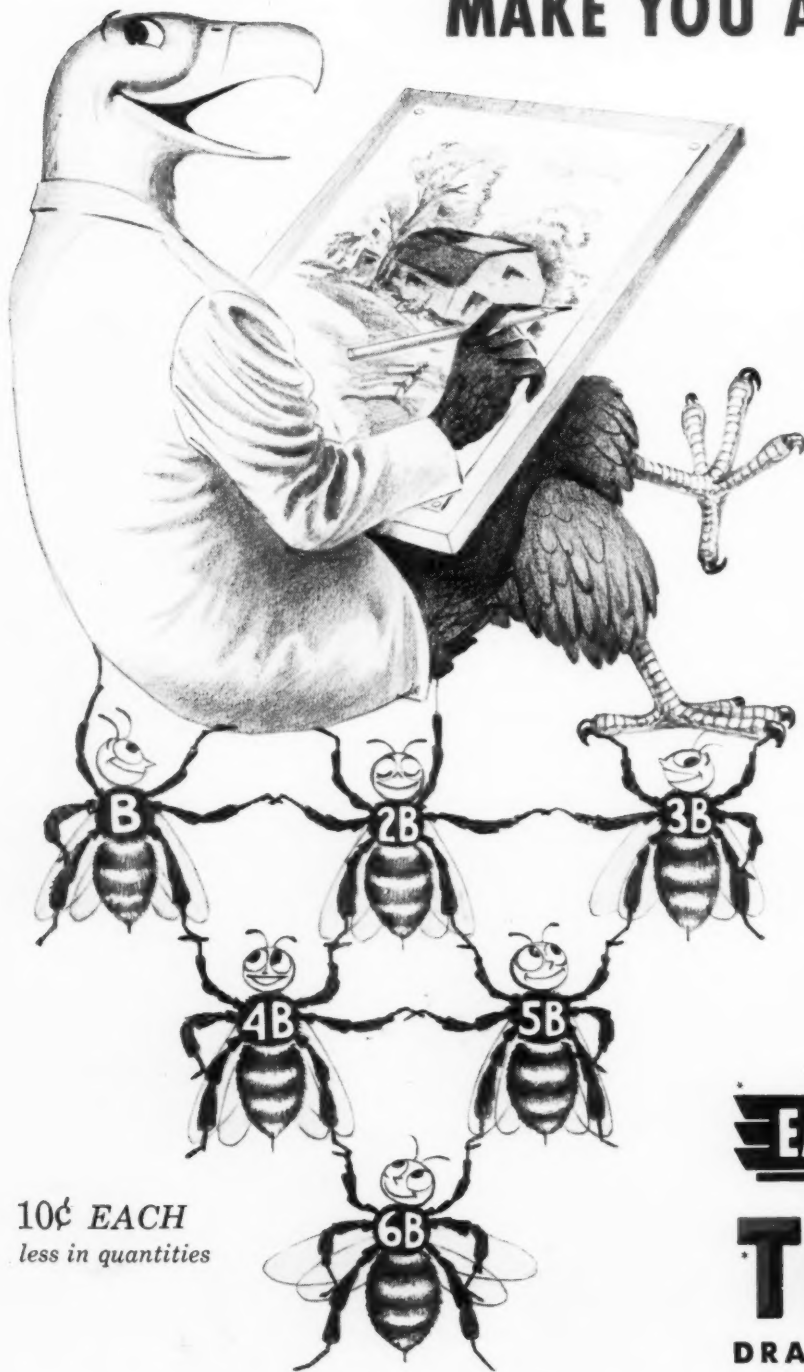
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**CERAMICS AND DECORATIVE ARTS**  
SEPTEMBER 1948

R v. 48 Sept. 1948 - June 1949

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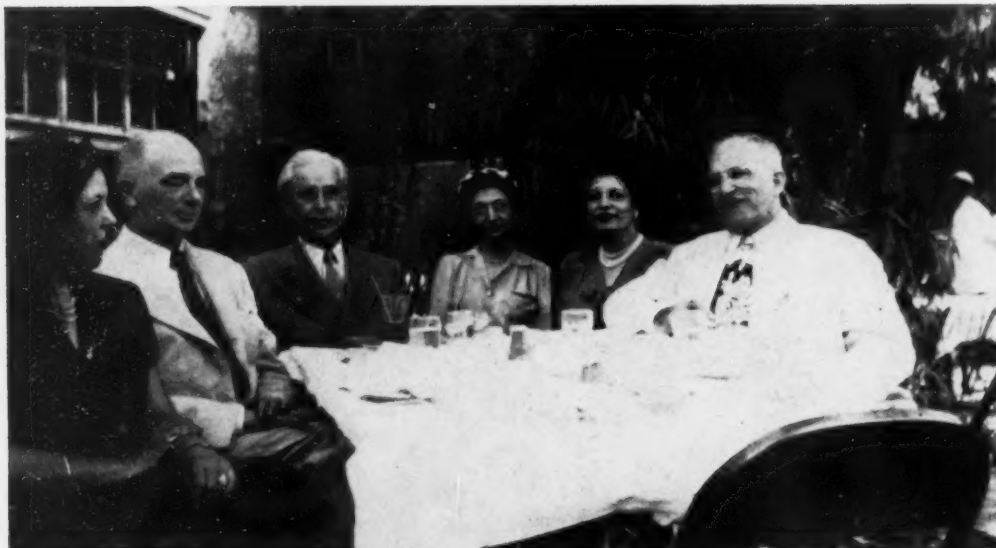
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School Arts, September 1948

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I-a



## WITHIN THE FAMILY CIRCLE



**T**HE immense growth in our Southern States both in industrial and civic development has been phenomenal. It has been created with guidance toward artistic architectural structures, which together with nature's lush, colorful flowers along highways and in home gardens, plus the tree-arched city streets, produces a semi-tropical quality of restful beauty.

The above group is one of several repasts given in Louisiana, Alabama and Baton Rouge University in honor of Editor deLemos. The hosts included prominent civic and educational leaders.

The group is one of several tables in the famous "Court of Two Sisters" in New Orleans. From left to right: Mrs. Harris Dawson, hostess and relative of Editor deLemos, and an active leader in civic organizations; Dr. Arthur Long, prominent in State Administration programs; Pedro deLemos; Miss Lugano, miniature painter and noted collector of ivory painted portraits; Miss Josie deMaggio, Supervisor of Art Education in New Orleans' Public Schools and Advisory Editor of *School Arts Magazine*; Dr. Lionel J. Bourgeois, Superintendent of Education in Public Schools, New Orleans.

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Start the school year on a high note with this set of 12 attractive color pictures, each with a narrow white mat-like margin. Your classroom will sing with gay color when you display these prints—and how about letting your pupils exercise their creative imagination in working out ideas for frames?

Here are some of the stops we make in "Flagship Land." First of all, we visit the Capitol in Washington, D.C., and view its dazzling whiteness set against a bright blue sky, with scarlet flowers in the foreground. Next we are speeding through the skyways in a five-mile-a-minute American Airlines Flagship, while below the landscape and blue water spread in a lovely design. Ireland comes into view in the next picture, with its mossy green coast fringed by the white spray of the ocean. England's quiet beauty has a lulling quality to it, with vine-covered cottages, a cobblestone street, and an atmosphere of Shakespeare's time still clinging to it. Canada shows a sportsman wading in the stream as he angles for trout in the pine-bordered waters. Next we stop off in Norway at a little house perched on a hillside that seems to sun itself as it looks out across the green valley. Sweden's towers rise majestically in our water-front view, and in Denmark we are greeted by a lovely mermaid statue in the harbor, symbol of a beauty-loving people. Holland's quaint, scrubbed houses marching along the water front and her trim boats speak of the hospitality that awaits all visitors. Next we stop in our own Southwest and view a sun-loving couple as they visit beside a

stream that meanders through the cactus-studded countryside, while two horses stand patiently in the stream before continuing their arid journey. Mexico is represented by a sun-bronzed gentleman and his patient little burrow as they rest in the sun with an ancient pyramid rising in the background. The last stop in our journey is not one country, but all the lands visited by American Airlines Flagships, represented by drawings of the continents and people. Fifty-one figures dressed in their native costumes, dance gaily across the continents in a colorful universal celebration. A Spanish dancer joins hands with a French farmer, while a smiling Arab looks on. A girl from the South Seas dances with a Cuban, who in turn joins hands with a sun-kissed Florida vacationist. Indians send signal fires, Eskimos rub noses, a Scotchman in kilts dances with an Irishman dressed in green, while a Canadian Mountie, an Indian maiden, and a Midwestern farmer join in a gay circle. I could go on and on, but you'll want to have the fun of discovering these active little figures for yourself.

Get your 11 full-color photographs and 1 colorful drawing from American Airlines by sending just 53 cents (which includes forwarding postage) to Secretary, The SCHOOL ARTS Family, 189 Printers Bldg., Worcester 8, Mass., before October 31, 1948.

(Continued on page 16-a)

### CREATIVE HANDS BOOK SHOPPING NOTES

**CREATIVE ILLUSTRATION**—Andrew Loomis  
A handbook for those whose art interests lie in the field of book and magazine illustration. Andrew Loomis is a master in the field, and sets

(Continued on page 8-a)

## THE SEARCHLIGHT

SPOTTING ART EDUCATION NEWS  
FROM EVERYWHERE

### ART ASSOCIATION HEADS for 1948-1949

#### EASTERN ARTS



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#### SOUTHEASTERN ARTS



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#### WESTERN ARTS



Pres. Dr. F. Louis Hoover, Head, Div. of Art Ed., Ill. State Normal Univ.; V. Pres. Ruth M. Blankmeyer, Elementary Art Consultant, Oak Park, Ill.

Photos, Courtesy W. H. Milliken, Jr.

School Arts, September 1948



## NEWS

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 N. J.

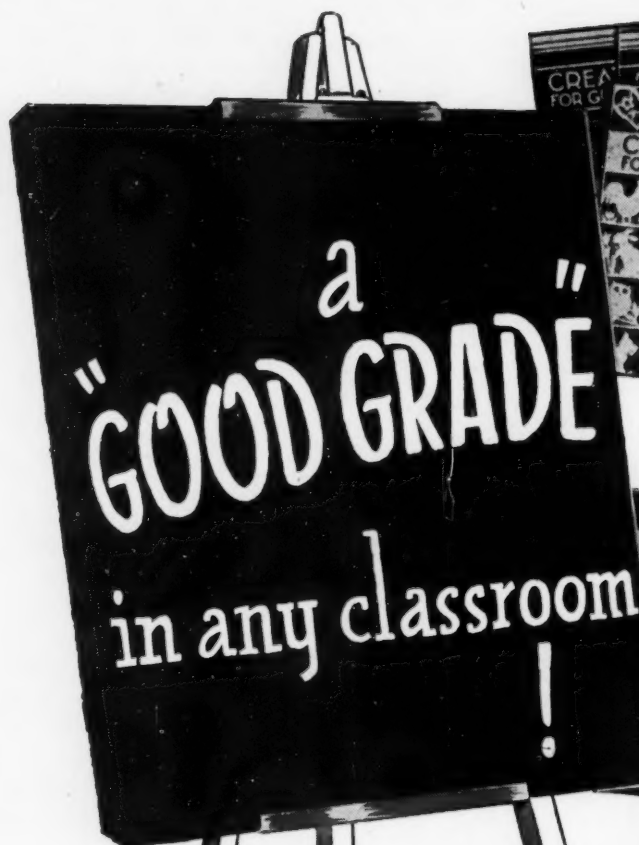
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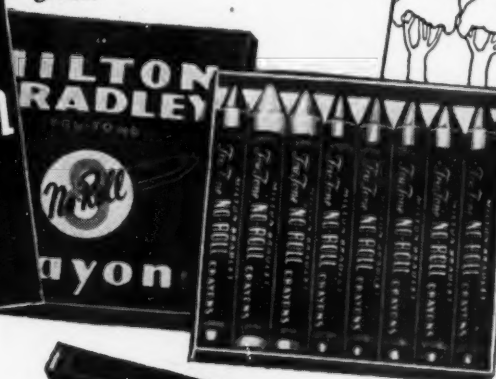
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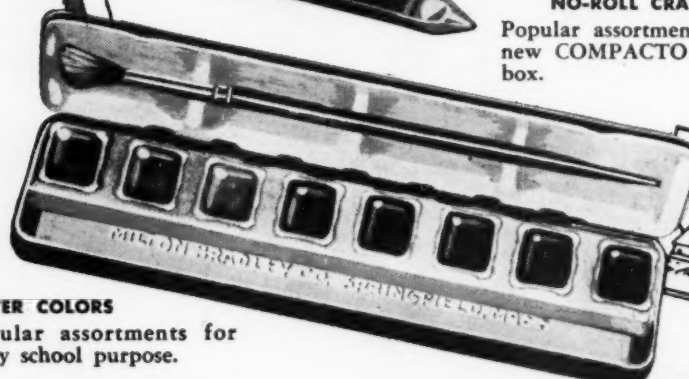
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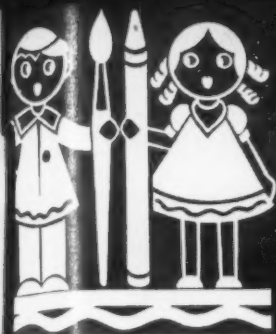
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# SCHOOL ARTS

A PUBLICATION for THOSE INTERESTED in ART EDUCATION

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## CERAMICS AND DECORATIVE ARTS

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A GEOMETRIC PERUVIAN BIRD MOTIF  
WHICH SHOWS FRET USED AS A PLANT FORM . . . . . Esther deLemos Morton

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## RECLINING SHEPHERDESS

An early American embroidered picture of the second half of the eighteenth century, worked by Susanna Heath Goddard of Brookline, Mass.

Gertrude Townsend, Curator of Textiles at the Museum of Fine Arts, Boston, emphasizes the dependence of the New England needlewomen upon designs from seventeenth and eighteenth century European engravings and paintings.

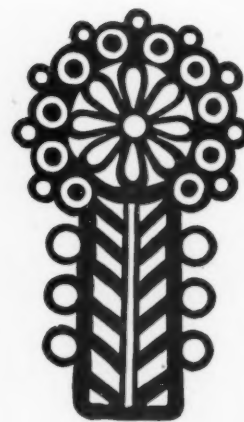
The art of embroidery was popularized in England during the late sixteenth and early seventeenth centuries, when the women delighted in decorating articles of dress as well as many household objects with their needles.



Museum of Fine Arts, Boston



Three Lions

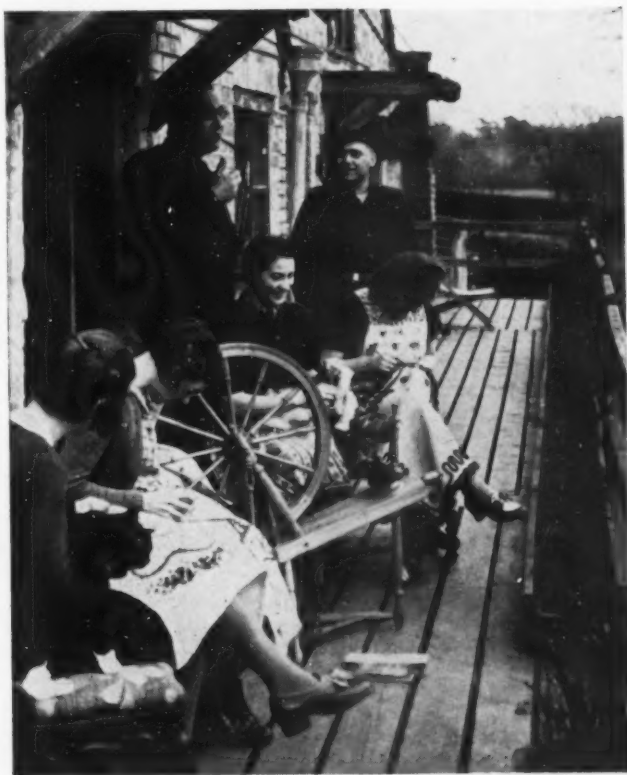


The modern loomed tapestries by the Kentish Weavers of Lamberhurst still favor the figure in textile design, though in more modern style



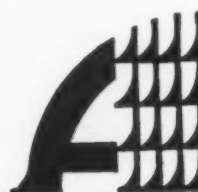


## THE KENTISH WEAVERS



Morning or evening—one will find the staff and inhabitants at the front of the house where they spin, weave, or do other needlework

Three Lions



PRETTY little village in the Weald of Kent is a weaving center of which Great Britain is proud. Spend one week, one day, or even one hour at Lamberhurst, and you will understand the meaning of these words. Here are the right surroundings for the weaving craftsmen, a veritable idealist's dream. In its plans, wool will be spun by hand, yarns will be dyed with vegetable dyes which make a change for the individual craftsman "from raw material to finished article." It is a reaction against the purely mechanical conception of our time which is indeed fully justified. Hand-woven articles are in demand, not only for their intrinsic merits of beauty and durability (which the machine, however ingenious, can neither equal nor reproduce) but because of their individuality, the fact that they lack the soulless uniformity of the machine-made product. Men with many different professions can be employed in such an industry; designers, painters, spinners, dyers, weavers, salesmen, clerks, etc. The training is very pleasant, and trainees have opportunities from the very beginning of doing creative work. The scheme has a dual purpose—the reviving of an old and glorious industry and the giving of congenial and remunerative employment to ex-servicemen.



The warp is made ready for the looms



Shuttles are wound in quantity with the many and varied colors used in the tapestries

*Three Lions*





Students of weaving and many visitors, among whom are people of fame, go to Lamberhurst to see the splendid work of the Kentish Weavers

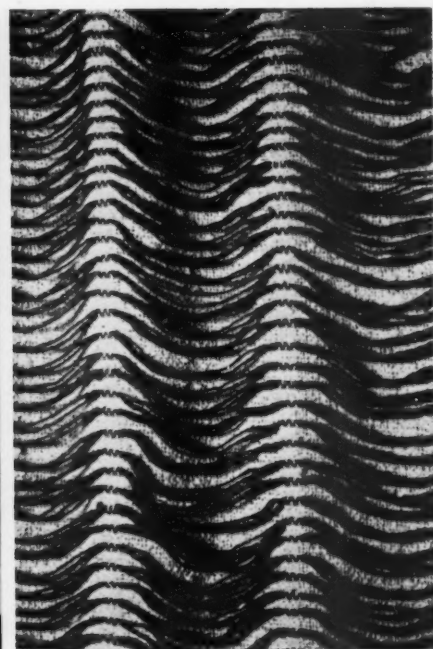


In leisure hours the staff's family and friends weave for their own pleasure and experience

Three Lions

**S**UCH tapestry panels woven with the best and strongest possible colors are almost everlasting, and can be made mothproof. They are of great artistic value, and even more characteristic of a nation's cultural standard than paintings. It is a mistake to think that tapestries are antique wallhangings only suitable for period interiors or museums.

Our French friends have always wisely cherished their arts and have preserved handweaving throughout the centuries, and the Government itself has encouraged the practice of weaving. At an exhibition held in Paris at Petit Palais just a month before the outbreak of war, tapestries after designs of eminent artists were shown. France is the proud possessor of a National School of Decorative Art at Aubusson, where all-round education is given in tapestry weaving and designing under the very capable supervision of its Director, Monsieur Elie Maingonnat, who is also an excellent artist and designer of tapestries. The Kentish Weavers have already executed tapestries designed by well-known contemporary British artists. They will also work in close cooperation with France and exchange ideas, and this should open a wider horizon for both sides. A number of Aubusson weavers will live permanently with the Kentish Weavers, and at Stair House there are also Mr. Cyril Kisby, A.R.C.S., A.T.I., who is in charge of the industrial weavers of the L.C.C., and his wife, also a fully qualified teacher of design, weaving, and embroidery.



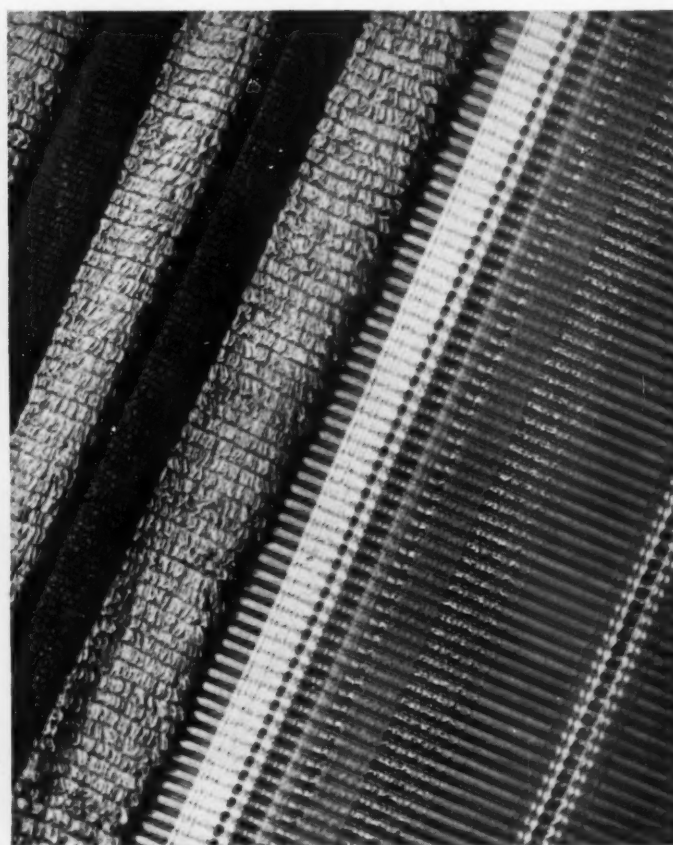
## NEW MATERIALS AND NEW TECHNIQUES ON THE LOOM

**E**XPERIMENTATION and totally new effects which put to use every practical feature of weaving technique highlighted the Sixth Annual Pacific Coast Textile Exhibition, presented at the Rotunda Gallery of the City of Paris, San Francisco, where Beatrice Judd Ryan is curator.

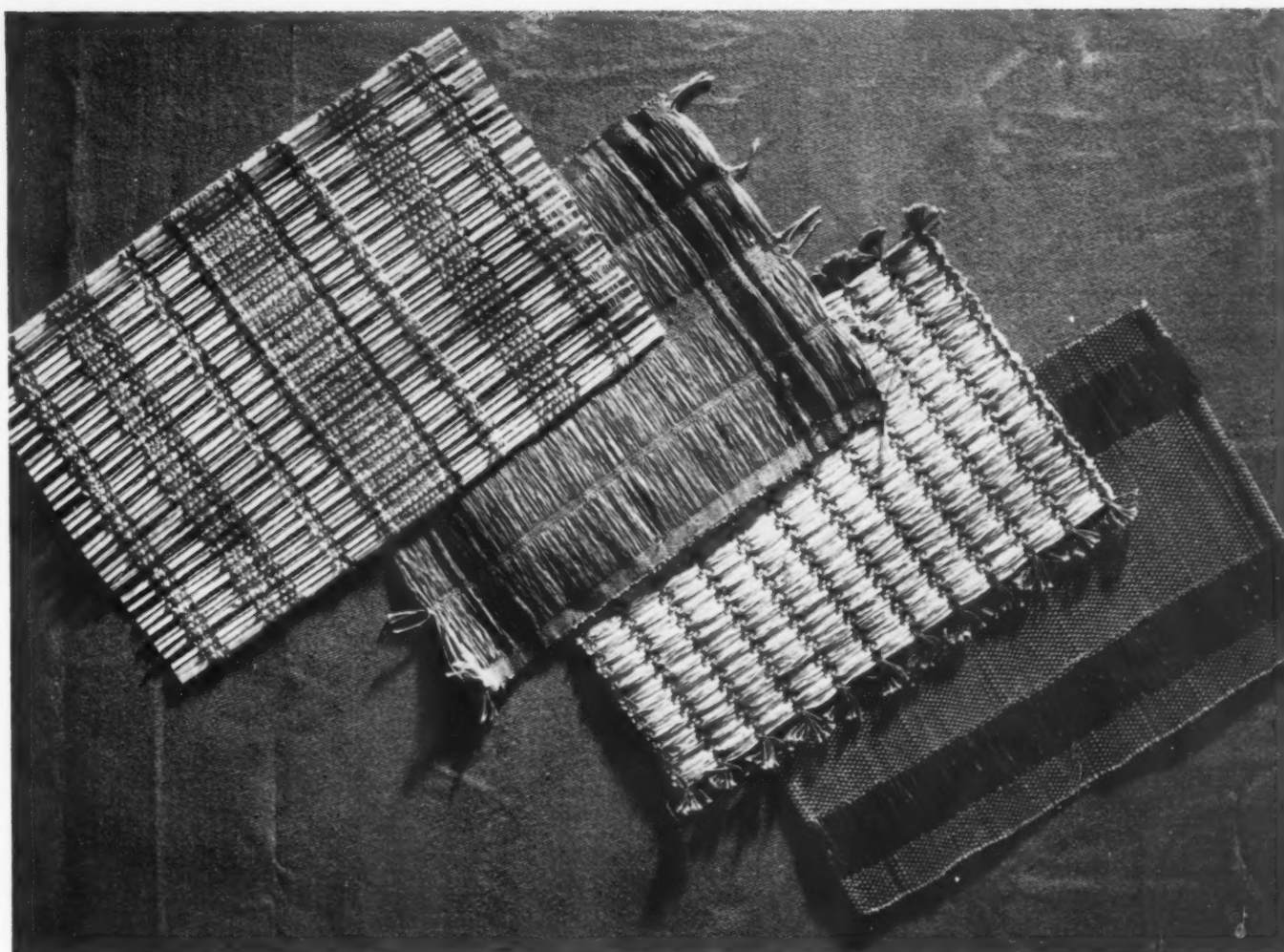
*Above:* Lynn Alexander of the Department of Architecture and Allied Arts at the University of Oregon demonstrates the weaving of a loose and webby wool technique. At right, the finished fabric attests to the decorative and artistic qualities of threads and shadows upon a light background.

*Below, Left:* Lea Van P. Miller, Assistant Professor of Design at the University of California, exhibited this rich arrangement of brown and gold stripes of light revealing irregular textured drapery material.

*Right:* Dorothy Wright Liebes of San Francisco created a wooden blind of brilliant colored reeds and half-round doweling with warp or varied copper and gold metallics shown with looped warp drapery fabric in stripes of varied colors.







## EXPERIMENTS WITH MATS

ESTHER deLEMONS MORTON

**T**HE perfect problem for short weaving lessons, practice or research is the mat. This versatile and popular addition to modern table decoration is both practical and decorative. The sky is the limit on materials, so long as they will hold together and produce a somewhat even surface.

No student needs much patience or time to successfully complete one mat. A single mat can be used to protect a stand or small table. Those who wish to weave whole sets can produce excellent gifts and useful additions to home decorating and table service.

A practical table mat averages sixteen to eighteen inches in width and may be woven either on the length of the warp, necessitating no hems and with the warp tied off for a crafts finish or with the warp running the depth of the mat and tied off on the upper or lower edges, producing a prominence of fringe. For smooth edges, a simple hem may be sewn.

Mats woven with reeds, bamboo, or grasses should be started with top and bottom borders of weft the same as the warp, then these borders can be hemmed more easily and make a cleaner edge than the grassy or rough material would.

Some fibrous materials, such as raffia and grasses, will be more pliable and weave more easily if slightly dampened, though caution should be taken not to moisten the warp and cause undue shrinkage.

Shown above are mats by experienced weavers of the Bay Region of San Francisco.

The mat at the upper left is one of a rich set created by Cay Garret of Berkeley. It is woven of split bamboo over varied stripes of cotton chenille boucle and rayon boucle warp. At center and outer edges is some string warp to add strength. The bamboo splint weft alternates with fine cooper wire in producing an interesting and sturdy texture.

The second mat, of more weft than warp, is by Julia Gutekunst of Palo Alto. The warp is used only as a necessary brace at two-inch intervals to hold the soft mesh of beaten chartreuse raffia, striped at either end with purple borders.

Nancy Cushing of San Francisco produced the next example which is a fine background for pottery dishes. It has a slight pattern in the brown warp threads, and natural beaten raffia weft. The tied-off edges produce an interesting fringe border.

Jan Rubin of San Anselmo set up warp twelve inches in width with both outer edges of darker color and open spaces of about two inches which show the beaten weft which is a brilliant blue raffia. Ends of warp are rolled and hand-sewn for smooth finish.

A loom is not necessary to mat weaving, as hand braiding or the most elementary type of frame can be used for mat problems. Research for varied and new textures from native and easily obtained materials will always hold the attention of art classes at all age levels.



## TREE OF LIFE DESIGNS

EVELYN M. DAHLBERG

Roosevelt School, Modesto, California

**E**ACH of our designs depicted the life history of the child who drew it. Interest was aroused by talking of the tree of life designs of India and a display of some Numdah rugs upon which this type of design is so deftly embroidered by the natives of India.

Lessons in color and form, preceding the tree of life problem, made this lesson in design quite successful.

We first made a color wheel and learned that there are analogous colors, shades, tints, complementary and split complementary harmonies, triad harmony, and monochromatic harmony and studied these groups.

We learned to draw all of the forms and placed three of them together to make an interesting composition. We made an all-over pattern design for a background, repeating the shape of the composition, and learned the basic principles of balance in composition, and having a center of interest in the composition.

We then reviewed the color lesson and selected one of the color harmonies to use in the composition.

**VARIETY.** We drew a composition using lines only to make an interesting composition, and the following

basic principles were learned: (1) variety of line makes an interesting composition; (2) variety of space also makes an interesting composition.

Another review followed, covering the monochromatic color harmony, balance in composition, and center of interest.

**THE TREE OF LIFE DESIGN.** We began with the roots (lines) and filled our papers with branches (lines) and watched that we had a good variety. We also watched the variety of spaces that the lines made. Next, we decided on where to place our center of interest, the symbol for the most important event in our lives. Then we filled our trees with imaginary flowers, animals, leaves, or forms—each representing an event or person important in our lives.

For color we used all the hues in the color wheel. To get color balance we used the "Color Triangle" (when we used a color once we used it in two other places to form a triangle). Our medium for the design was wax crayon, with the background washed in with a tint of poster paint.

After each child finished his "tree" he wrote a story interpreting it. The problem was especially interesting to the children since it correlated with the English Department which requires that each child write his autobiography during the eighth year.

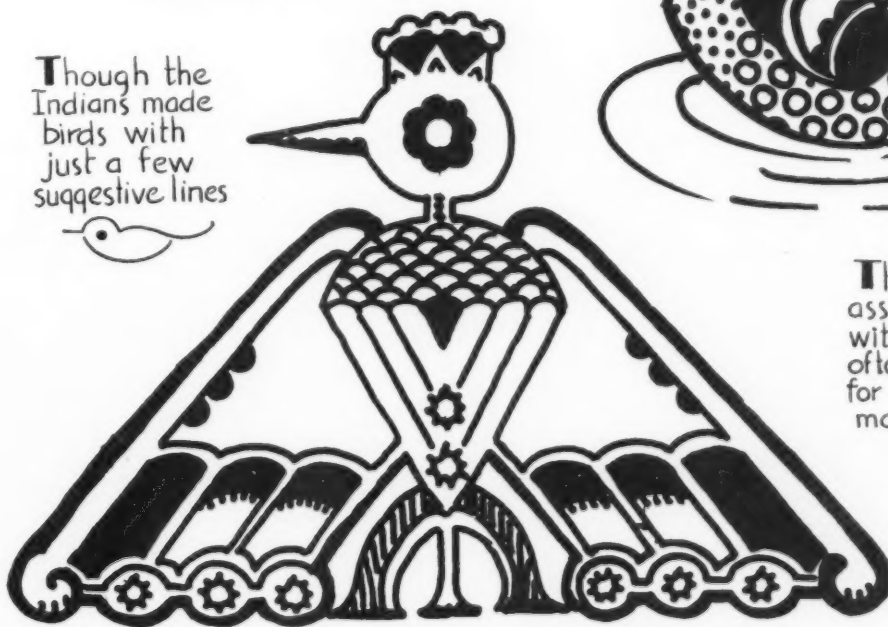




Creative Birds  
have bodies, heads,  
tails, wings and  
feet



Though the  
Indians made  
birds with  
just a few  
suggestive lines



"If there are  
Fairies there  
must be  
Fairy Birds and  
Fairy Flowers  
and Trees.  
Since Fairies  
don't look like  
real people  
their birds  
will be  
different too"

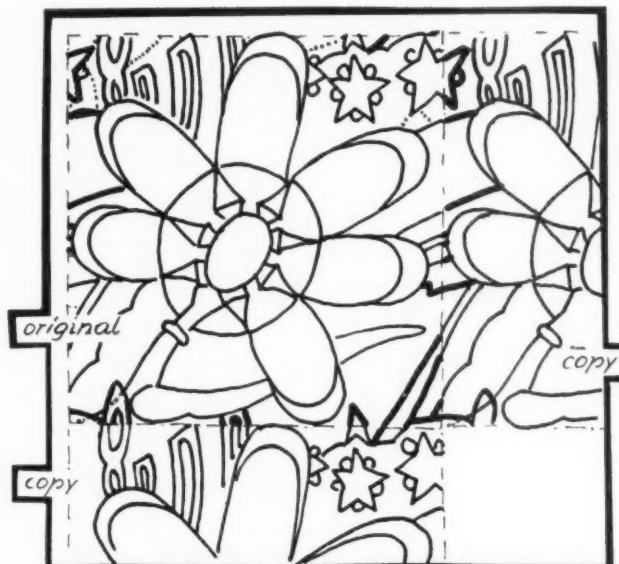
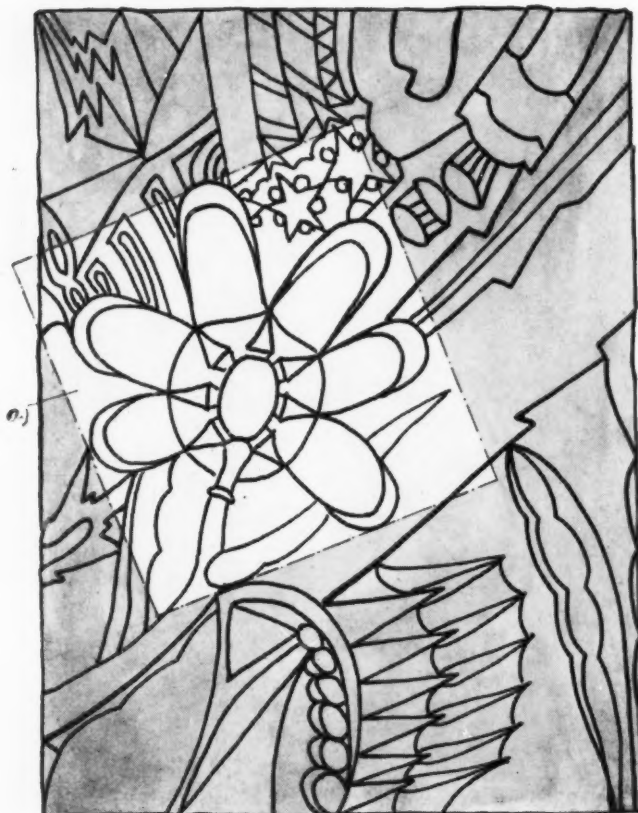


The Indians also  
associated birds  
with nature and  
often used leaf shapes  
for wings or a flower  
motif for an eye



Una Ann Greenwood  
Lewisville - Ind.

One of the most delightful approaches to creative design is the study of birds. One will find it most profitable to make a study of ancient bird motifs of all kinds before attempting original designs



Portion of design within the broken line area has been selected for repeat in textile design above

The lines to be taken out of original unit are marked with dots, while additional lines for sake of good connection are marked in heavier line

## THE EASY WAY TO TEXTILE DESIGN

MARIA K. GERSTMAN

Formerly Art Teacher, Vienna, Austria, High Schools

**T**HERE are several ways to climb a mountain—and there are several ways to approach the task of creative textile design. There certainly is no achievement in doing a design the hard way—especially when working with children who are yet to learn about form relationships, a prerequisite for artistic planning.

The method which shall be suggested here for the designing of printed fabrics is simple and easy to follow. It also develops the sense for matching forms and understanding of the underlying idea of such a design.

When printing a fabric, one form unit is rhythmically repeated in direction of length and width. However, designing such a unit that lends itself to formation of an organized and coherent pattern asks for greater skill than the beginner usually can supply. Basing the method to be described on the fact that it is easier to properly frame an existing unit than to create a new one, the student first is encouraged to fill a provided space with all the forms that come into his mind. Carefully limiting each form from all sides, thereby clearly defining its shape, one

form is added to another and slowly developed without a preconceived idea in mind.

The forms thus arrived at do not have to represent a design. They should, however, show a great variety of forms and appealing proportions for at least some of the form combinations. In looking over the drawing, some forms will be found to be related to each other, representing a unit of forms. With the help of four strips of heavy paper, which may be moved to and fro until proper limitation is secured and marked on the drawing, such a unit is separated from the rest, this representing the chosen unit.

In order to achieve connections between units, the unit is copied on tracing paper and placed next to the original. Some connecting has to be done. For reasons of simplicity and clearness, some lines will have to be continued into the neighboring field, others removed. Naturally, both sides of the unit have to show the changes that have occurred while connecting right and left.

When connections between units in one direction have been completed, it shall be done in the other direction. For this purpose the copy is placed below

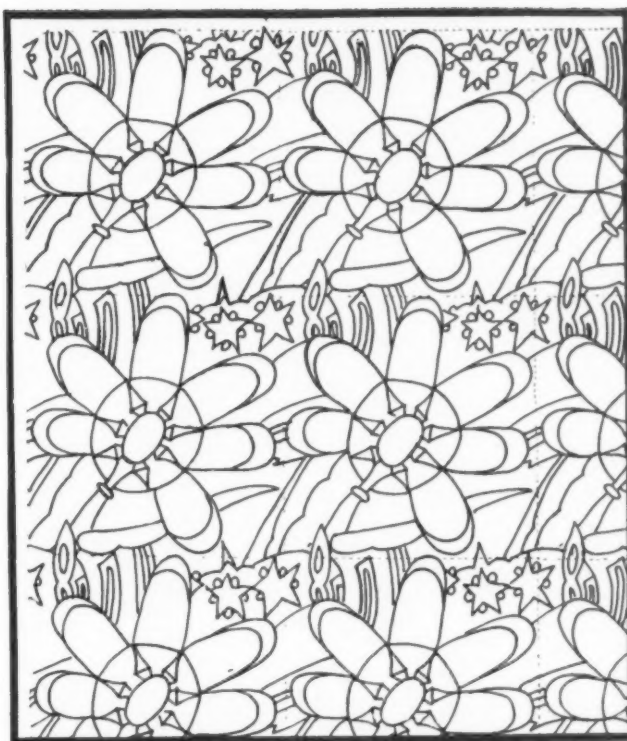


the original and the adjustments made have again to be marked on both corresponding sides.

With transitional lines adjusted, the pattern is completed and may be traced, one unit next to the other, following directions of length and width.

Such a pattern sheet can supply material for innumerable original designs, depending on the stressing of different form elements with the help of color and the omission of others; or the combining of certain forms through harmonious colors and the separation of others by contrasting colors. They all make for a different pattern, rich in detail and strong in composition.

The choosing of colors according to different conceptions as well as the training to recognize promising form movements in the pattern sheet will prepare the student for conscious planning and will give him understanding and assurance to do independent work.



Pattern sheet shows completed outline of repeated design motifs

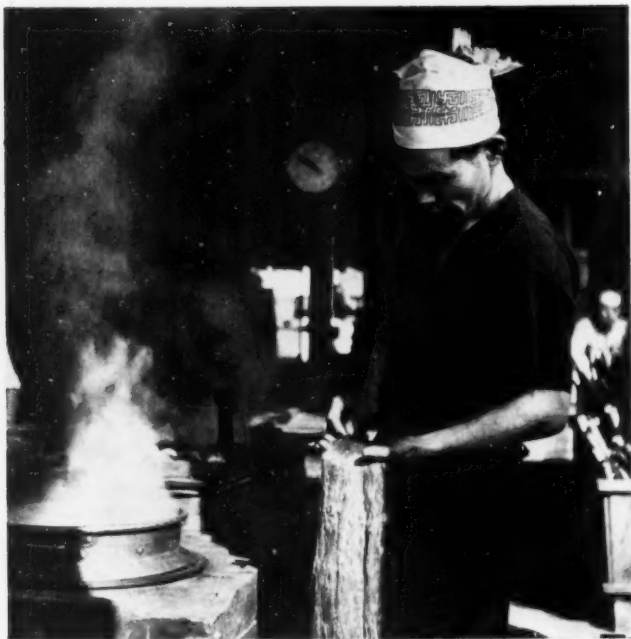


The design or pattern is further developed by working on transparent paper over the pattern sheet. What could be color is here represented by textured areas. Similar textures represent standard or harmonious colors while contrasting textures mean contrast in color



Completely different patterns may be picked out of same work sheet

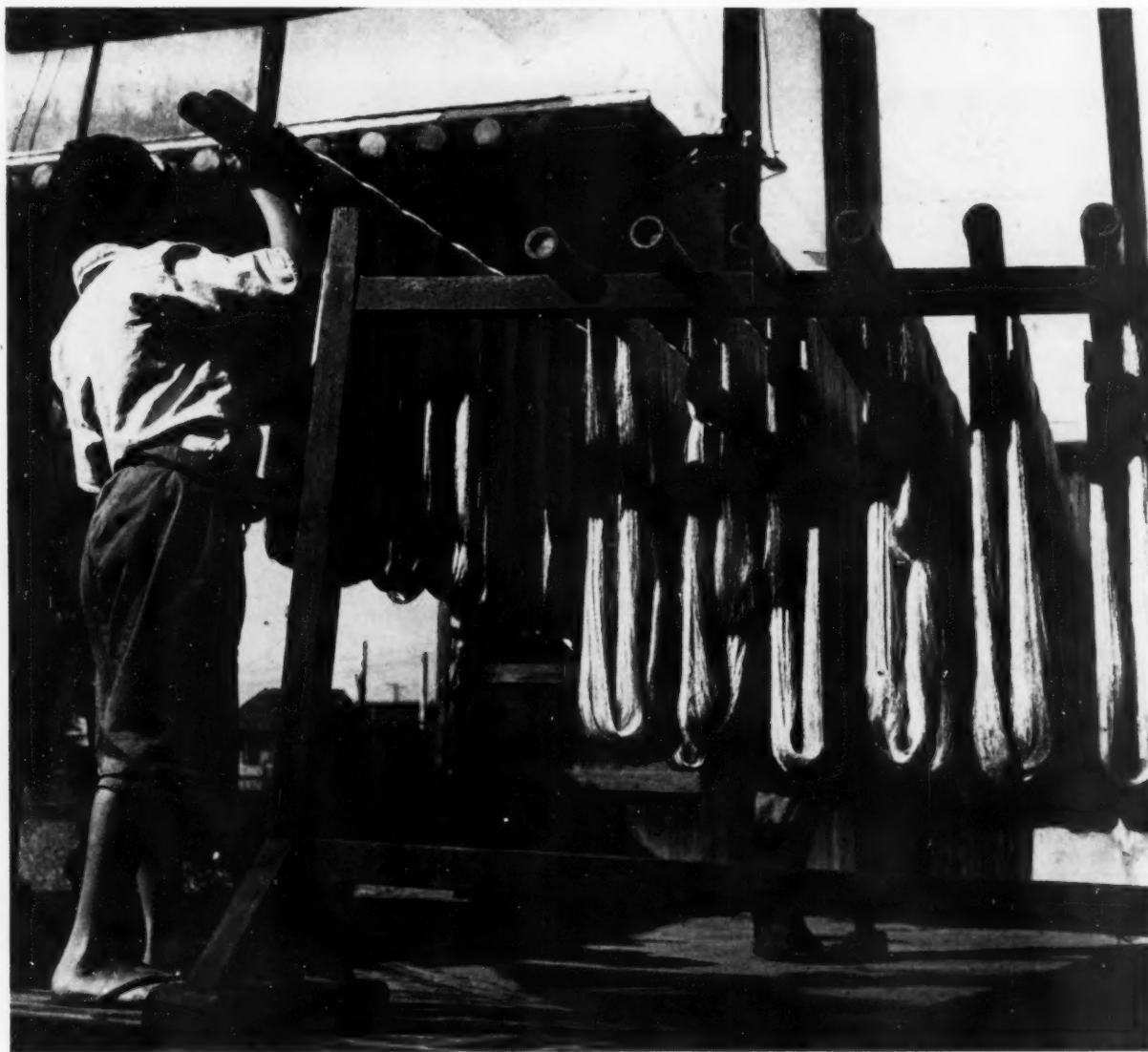




A dyer tests the color of silk thread to see if it matches the sample. As many as fifty shades may be woven into one "obi" or sash



This boy winds the silk thread onto the bobbins for the weavers. This trade is taught from childhood, the children performing the small, menial tasks

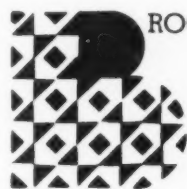


Hanks of dyed silk are carried outdoors on bamboo rods, where they are placed on a rack to dry in the sun

*Three Lions*



# NISHIJIN OR JAPANESE BROCADE



BROCADE, or "nishijin" in Japanese, usually implies a class of decorative textiles enriched on their surface in weaving of low relief, with the floating threads at the back of the fabrics either hanging loose or cut away.

Although the techniques of brocade manufacturing were originally imported from China, Japanese weavers have promoted the art to a high degree of perfection. This success is largely attributable to the progress of Japan's silk-spinning industry, and also to the fact that the "obi," or sash wound around kimonos, has always called for superior brocade workmanship.

Kyoto is the center of Japan's de luxe weaving industry, with the weavers quartered in the sector of the city called "Nishijin," responsible for the larger percentage of the output of de luxe silk fabrics. Although the weaving industry of Nishijin was partly shifted to the manufacture of silk-rayon mixture fabrics in recent years, a total of 9,000 households are still engaged in weaving expensive brocades as a cottage enterprise. These weavers belong to either of the two weavers' associations quartered in the city, one consisting of independent weavers and the other composed of members who weave on a subcontract basis.

Kyoto's silk-weaving industry dates back to A.D. 794, the year when Emperor Kammu founded the ancient capital. At first, all weaving activities were conducted under the direct management of the Imperial Court. Later, under the Ashikaga Shogunate, advanced methods were imported from China.

**W**ITH the advent of the Tensho Era (1573-1593) the weavers of Kyoto began to produce a larger variety of fabrics on newer ideas borrowed from Chinese artisans, including gauze, brocade, damask, satin, and crepe. Designs, however, were usually based on original Japanese ideas, ranging from ducks floating on rippling water, iris in streams, fowls with chicks, and cranes on wing to assorted landscape effects including lakes, streams, clouds, pine trees, castles, and bridges. Since 1661 Nishijin looms have also turned out plain and figured Habutae, as well as gold brocades, figured crepe, striped satin, and other luxurious fabrics.

Tapestry is another fabric which has brought fame to Kyoto's weavers, although its manufacture is only of recent years. In tapestry-weaving, no shuttle passes backwards and forwards across the fabric, for the weft threads which form the pattern are inserted by hand alternately over and under the warps with the aid of wooden bobbins. Tapestry may well be compared to mosaic as the threads are only inserted in order to cover the particular space for each color, as the design requires.



This woman applies a sizing to the silk over which she rubs gold powder. Thus an added lustre is achieved



The design pattern is placed under the warp threads, the weft inserted loosely by shuttle, and the woven threads worked down with the fingernails or comb-like instrument. A skilled weaver can weave only a few inches of obi in ten continuous hours of work



*Three Lions*  
A large assortment of shuttles is necessary for the many colors and shades of thread used in the intricate brocade of an obi

## FURNITURE



A curvilinear chair with woven braid designed by the author on the lines of an ancient butaque

## CONTEMPORARY DESIGN OF FURNITURE

CLARA PORSET GUERRERO  
Mexico, D.F.

**T**HE advent of the machine brought chaos to the world of art of the middle nineteenth century. So revolutionary an event caused the usual confusion of ideas that is always brought about by radical innovations, and there was great ignorance of the possibilities of industry in connection with art—and great fear. Could the machine produce art or would it kill it outright?

Amidst such confusion a great figure rose in England trying to bring order to the chaos: William Morris. He sensed clearly a situation in which art was being isolated, and marking its dangers, proposed a turn about face to the machine and a return to arts and crafts. The solution was wrong but at least his healthy intention led him to initiate a strong movement which contained elements of honesty that are still valid today in our contemporary approach to design. For that he may be rightly called one of its most important initiators, and his contribution: the Morris chair—ever present in American homes of the turn of the century, and even in many of our day—as the first modern chair.

Facing the problem of design for industry, several unfortunate attempts have been made after that of Morris such as the French Art Nouveau or the Viennese Kunstgewerbe of the early 1900's, the Decorative

Arts of Paris of 1925, or what is now called in the United States "streamlining." All have had a superficially decorative character and an aim of novelty rather than of obtaining honest and essential solutions to the particular needs and conditions of our time.

However, another movement has originated, almost simultaneously with the above-mentioned decorative attempts, in which the problems arising from the drastic transformations brought to our lives by the increasing progress of industry and its relation to design have been attacked with a thoroughness that in furniture is leading to a satisfactory answer. In the twenties Marcel Breuer designed metal furniture to be constructed in series by the greatly developed industry of that period in Germany. By using this material with full comprehension of its properties, and giving to it a structure consequent to its union with technical possibilities, he made one of the most remarkable contributions to contemporary furniture. Another important step was soon added to the process by Ludwig van der Rohe, also in Germany, with a chair in which the spring qualities of tubular metal were introduced. Late in the twenties Le Corbusier, in France, designed distinguished metal furniture. And in the thirties Alvar Aalto, in Finland, created a whole line of furniture using the woods that grow so profusely in Finland in the form of bent plywood, equivalent to another revolutionary achievement. Briefly, this has been the process of contemporary furniture design, evolved to its present stage of maturity after passing through the natural vicissitudes, inhibitions, and affectations that are unavoidable at the start of any movement.

**W**HEN authentic in origin and development, our furniture has come to be a sound, useful, and often beautiful product of the conditions and requirements of our age. But a misconception persists still about its essence which leads often to a reluctance on the part of some people to incorporate it to their everyday lives. Progressive schools, museums, and publications are doing a splendid effort towards the enlightenment of the great public, and many have already been converted to their preaching of the idea that there is art in furniture only if this is a live and true product of its day. Much of the error is due to the confusion that arises from the false presentation that indiscriminating commerce makes of products, such as furniture, upon which it thrusts unwittingly terms that are more or less related to a concept of actuality but that have really nothing to do with its marrow. People are drawn to these products advertised as modern, instinctively attempting to be in harmony with their time, but then, at their sight, they turn away. Although ignoring it perhaps, they have acted rightly, for what they have seen is far from being authentic—so the withdrawal was deserved. The fact is that they have not seen furniture that is truly modern, though it may have been constructed recently, but a combination of odd shapes, unrelated lines,



and dominating ornament, resulting from a deaf and blind use of materials and from a desire to impose it regardless of its implications of cultural degradation.

Design for industry is envisaged in the new movement with more science and more art than ever before, and with awareness of its relation to the movement of living architecture, it is made to share its organic development of form. Form that emerges biologically, from the inside to the outside, interrelating and integrating lines. Also as in architecture, the movement of furniture design recognizes similar determining factors, such as relations to environment and climate, or to the promptings of materials, and tradition rightly understood.

**M**ATERIALS are used today with respect and sensibility for their inherent nature, either when they have a natural origin—such as woods—or a technical one—such as plastics. They are worked with what is best and more adequate in the technical development of a country, or region. And because there is an understanding of the interaction of both, that is of the materials and tools or machines, a degree of resistance is arrived at now proportionate to the demand of it, varying according to specific function. It does not mean, however, that massiveness is required for strength, because in our quest for lightness—an intention that is similarly found in all processes acquiring maturity—other properties of materials, such as tension or resilience, are preferred. Compressed plywood, for example, offers resistance by tension while remaining subdued in weight. When furniture is made of it, it is extremely light and thus line is stressed in it rather than mass. Nothing can lead so much, or so integrally, to variations of formal expressions as the appreciation of the nature of materials, or the understanding of its language. The revaluation made of certain materials that lived obscurely and that have now been brought forth to full light is part of this new approach. In Mexico, the beautiful textures of plant webbings—*ixtle*, hemp, or palm—that were used unimportantly for harnesses, market bags, etc., are now receiving their due and being incorporated structurally to contemporary furniture. And when combined with woods, which present extraordinary interest of surfaces, the Mexican modern production of furniture is invested with a distinctive character.

**A**T PRESENT the concept of the functionalism of the form designed is better integrated, and that has brought more possibilities to its capacity for producing physical as well as visual comfort. It is understood generally that form must function well, mechanically. What was taken to be a revolutionary approach only a few years ago has become a standard requisite now, something that goes without saying, but the term has been broadened to make it more inclusive, so form must function in a more integral manner. Chairs are designed not only to fit the anatomy but also to

fit the different postures required by the varied activities of life. Sitting we work, we relax, read and dine; we even move about sitting in vehicles of transportation. And we may do all this sitting in a tropical region or in a cold one, a difference which affects line as well as material. Torrid temperatures require free and almost horizontal ways of relaxation to counteract overpowering heat and humidity. Bamboo, linen, palm, *ixtle*, or hemp are then ideal, used in light structures in lines similar to a hammock, which would give psychological comfort as well as physical. On the other hand, in a cold region, snugness and warm materials are required—a chair for relaxation would be more upright, upholstered possibly, and less airy. Unit furniture is an outstanding addition to the range of function. Produced in series, with related dimensions, it is accessible to more people because more reasonably priced, and it offers infinite possibilities of arrangement and combination. Its custom-made counterpart is the built-in furniture: closets, partitions, bookcases, etc., which becomes part of the architectural design and tends to give more freedom of circulation.

There is no doubt that the furniture issuing from the contemporary movement is both strong and useful. But does its appearance respond with equal accuracy to our esthetic needs? I think that it has not always done so. Much too often it has been science without art, and it has left wanting one of our permanent aspirations: that of beauty. Wholeness in form is needed yet. Form that may satisfy not only the practical needs of resistance and utility but those that satisfy our particular sense of form as well. This



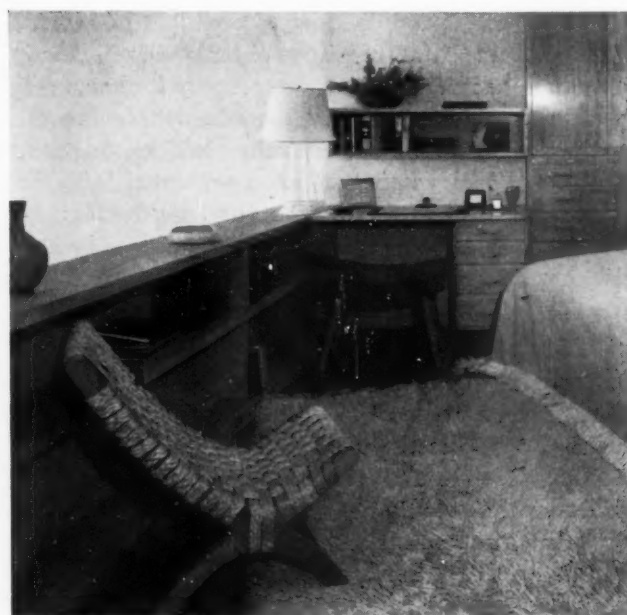
The author's design of a rectilinear chair with woven fibre for seat and back

would not be the type of beauty connected with designs that have emerged from past ages—these so naïvely considered sometimes as unique producers of the beautiful, as if by some strange reason our own age were impotent to generate beauty. It would be the type that results from the simple and honest solution of physical and spiritual needs of our own times, intermingling in the form with strength and utility till it becomes one unity: strength-usefulness-beauty. Not until then will science and art be well joined, and more than joined, fused.

**D**ESIGNERS aware of the exactions and possibilities of their time work on the same principles, anywhere. But because of this sameness of principles the results are different. Because, for them, the first consideration is that of the men for whom the designs are intended. In what "milieu" do they live? What is their cultural heritage? What is the climate of the region they live in? What tools, or machines, do they use? What are they like, anatomically? Neither the group of men nor the region is taken restrictively. There will always be things in common, no matter how much apart from this men may live, and there are functions that have not changed perceptibly. Yet there will be more differences than analogies, as many as there are of habits and tastes. Then, if we refer to a particular chair as Mexican, or as American, it will not mean falling into trends of narrow nationalism. Each one has been designed having in mind a precise group of men and for their benefit. These men will be unlike others in anatomy and in psychology and they will live in diverse conditions of culture, of economy, of soil and climate, so it follows that the formal expression in furniture should be also different. That neither the Mexican nor the American chairs have been spontaneously generated is obvious. Both have antecedents, near and far. In Mexico, two originally distant and distinct types of culture, one autochthonous, one foreign, are converging towards one point of union which will eventually become a distinctive reality. What was Indian and Spanish is to be Mexican. In the furniture designed in Mexico now there are traces of this entire cultural process, which is a rich one. In the rectilinear chair illustrated, the Pre-Hispanic, Indian, ancestry is perceived clearly, while in the curvilinear one the forefather is the "butaque," the hammock-like chair found now in the low, tropical regions of Tehuantepec, Tabasco, and Yucatán, but originally Spanish. There are characteristics in the Mexican that have imperceptible changes, such as its anatomy and psychological trends, and there are no radical transformations in technique, as Mexico is still in a semi-industrial stage, so the resemblance between the Pre-Hispanic chairs and the modern one can be justified, even over such a span of time. A variety of materials have been added. The keen appreciation of texture, for example, and further consideration of function in relation to climate have led to the structural use of webbings of linen, ixtle, and hemp, in Mexico, that, following the same

trends, may have led to the employment in the United States of laminated woods, in their natural surfaces. The chair designed by Charles Eames, illustrated, represents today the highest achievement in American design, which could only be produced in stages of industrialization as developed as the present one in the United States. The unity of the chair is complete: there is strength, there is utility, and there is beauty in it, and all in one. It has come into being with antecedents that are foreign, as a splendid development of them. The metal chairs of Marcel Breuer, designed at the German Bauhaus in the 1920's, and those of Alvar Aalto, produced in Finland in the thirties, are, undoubtedly, sources. But while the Eames chair could not exist perhaps without the previous existence of the others, it is now liberated enough from its sources, and distinctive enough in itself, to have its own essence and thus be able to claim individual identity.

**T**HE aspiration to obtain wholeness of form in furniture, as in other objects that belong to the equipment for living, is part of the broader aspiration to bring art to everyday life. We claim to be already treading grounds where the old feud between the "major" and "minor" arts is coming to an end; one has descended a great deal from its inaccessible pedestal (though not, of course, in quality) while the other has ascended to meet on more familiar terms. There may—and should be—wholeness of purpose and appearance in a kitchen jug as much as in a chair, or in textiles. If perfect, we might derive as much esthetic pleasure from them as we might from a good painting, or a good piece of sculpture. Why, then, postpone the enjoyment in either case, by approaching art solemnly, and distantly, much with the old attitude of severance from a dress for great occasions only? Why not live with it familiarly, and daily?



Another butaque-styled chair covered with braided fibre instead of the customary leather





Above: "Poeme d'Amour"—Detail of textile designed by Stig Lindberg and printed in silk screen process in the studio of Nordiska Kompaniet of Stockholm

Left: A blue and white silk screen textile designed by Mrs. Astrid Sampe-Huetberg

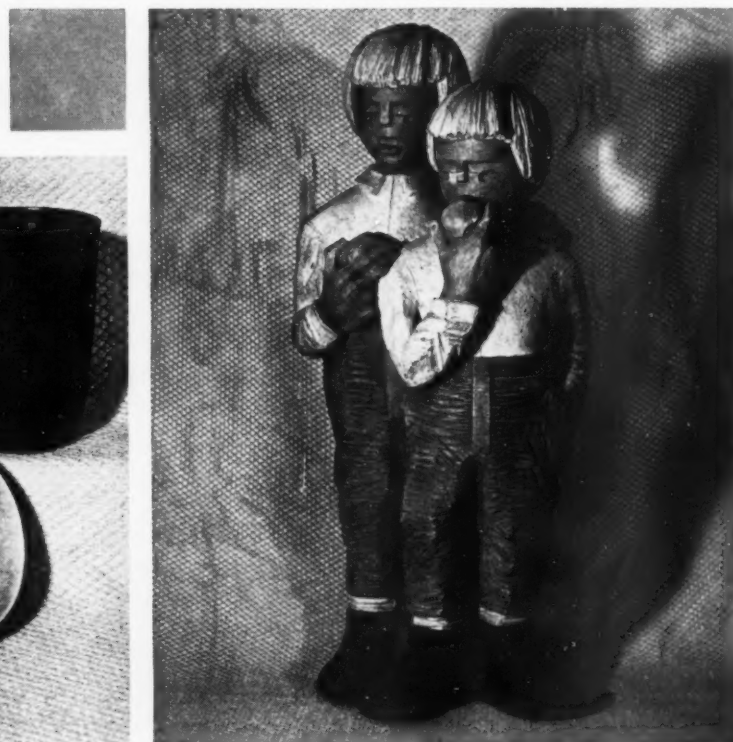
**M**ODERN textiles, furniture, rugs, and decorative accessories from the recent exhibition of Swedish Decorative Arts held at the Worcester Museum of Art and later exhibited at the Newark Museum.



Table and chairs by Alvard Aalto, a rug designed by Barbara Nilsson, and textiles by Hemslojdföreningen and Josef Frank

Chair by Bruno Mathsson and table by Elias Svedberg-heul. "Lappland," a textile by Sofia Widen-heul and a "Rya" rug with pattern of snow traces, designed by Viola Grasten

## CERAMICS



## IN THE EAST

At the Syracuse Museum of Fine Arts ceramic artists from all over the United States competed in the Twelfth National Ceramic Exhibition.

First prize awarded by the Liturgical Arts Society, Inc., of New York went to Adolph Oderfer of Fresno, California, for his ultra-modern religious sculpture, "Abraham and Isaac," shown at the upper left while the tea set by Minnie Negro of Alfred, New York, won one of the Richard B. Gump, San Francisco awards for the best designed piece or pieces of pottery suitable for mass production.

Shown at lower left are bowls of earthenware with colored lustres and impressed texture design by Herbert H. Sanders of Alfred, New York, while William Swallow of Allentown, Pennsylvania, exhibited "Earth and Apple—or the Ploughboys"—in stained terra cotta, which is at lower right.

## IN THE WEST (opposite page)

The Seventh Annual Pacific Coast Ceramic Exhibition was held at the Rotunda Gallery of the City of Paris, under direction of Beatrice Judd Ryan.

First prize in sculpture went to Adaline Kent for her bisque sculpture "Dialogue" (upper left), and first prize in pottery was awarded to F. Carlton Ball of Mills College for the salt-glazed coffee pot at upper right of opposite page.

Center left: Of particular interest was a small porcelain salt-glazed jar by Margaret Jipp of Oakland.

Center: The pictograph type of incised decoration by Rex Mason called "Cosmic Dust" was outstanding as an example of surface decoration.

Center right: A functional and cozily decorative teapot by Marie Wilson of Oakland stood high in originality.

Lower left: A bowl with decoration of lustre and frost glazes by Harold Riegger of Mill Valley won the honorable second prize and "Fish Wife," by Lillian Kandall of Fairfax, was an outstanding terra cotta sculpture.





## THE OLD AND THE NEW



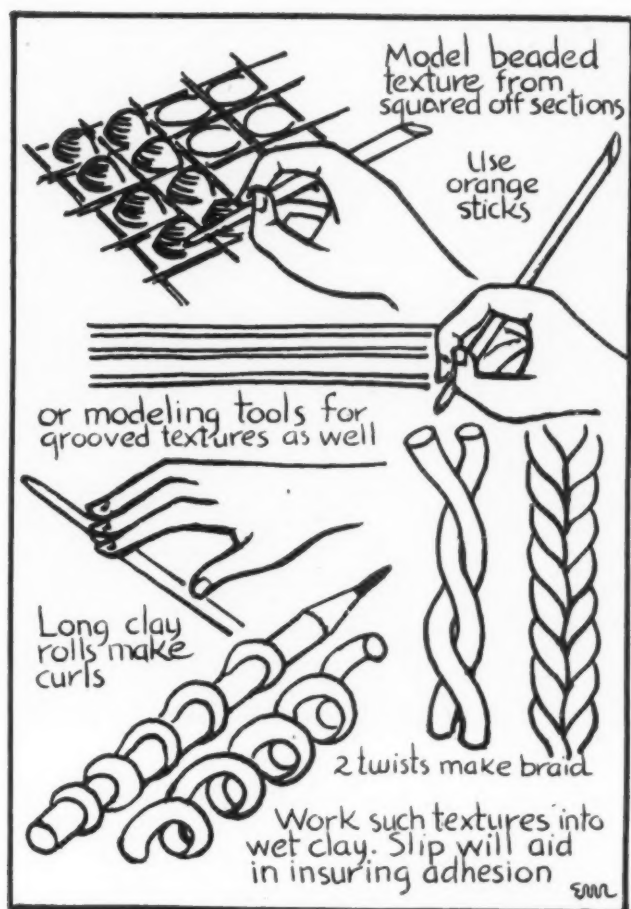
*Upper left:* An antique salt-glazed gray stoneware jar with decoration of incised blue enameled flowers. Height, 10 $\frac{7}{8}$  inches

*Above:* An old stoneware crock made at Fulper Bros. Company Pottery in Flemington, New Jersey, 1889

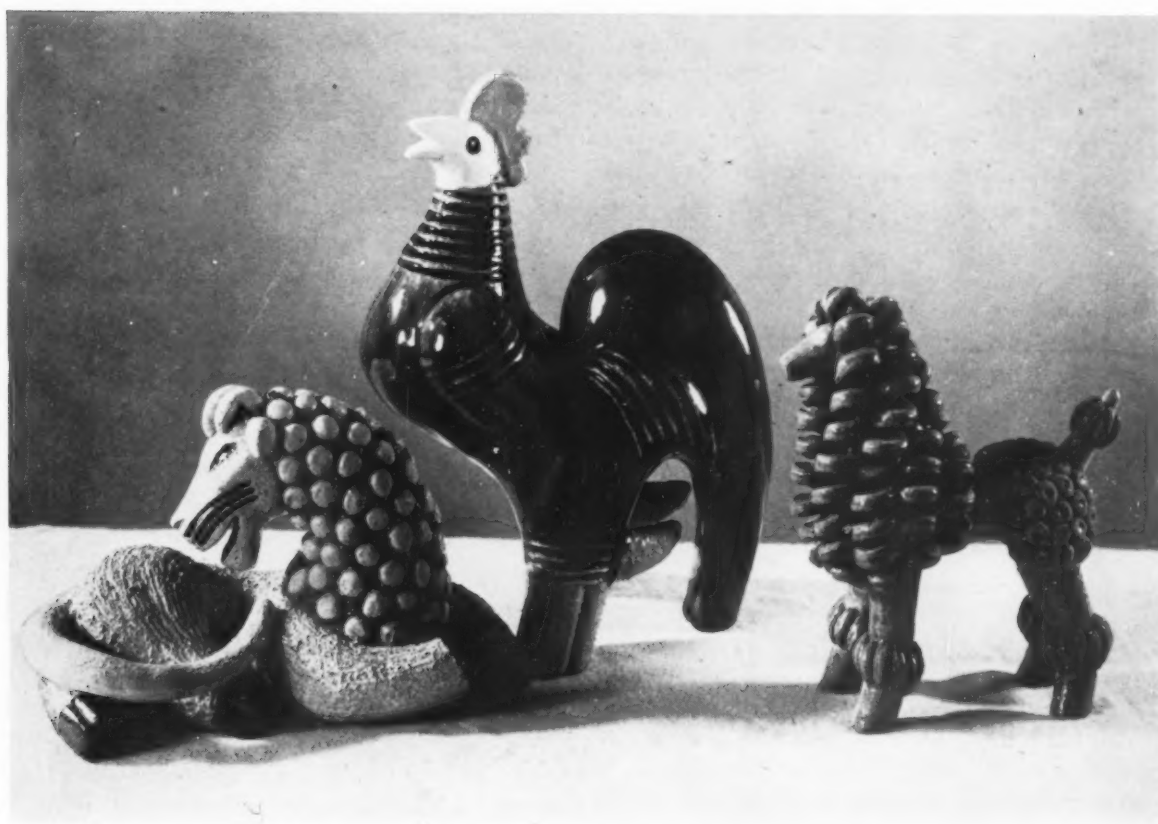


California's artist-ceramist, Edith Heath of Sausalito, proves that stoneware of good modern and truly functional design has its place among pottery marketed for popular home use. Features of the teapot are its heavy gauge sheet-copper handle bound in plastic and a lip which locks the lid when pouring, and spout with lip designed so as not to drip or run back





An old incense burner from British Honduras shows the possibility of surface textures in pottery. Strips of clay create feathers while twists of it make a braided effect



Modern ceramic animals by Adolph Oderfer carry the use of surface textures and techniques to a high degree of decoration and caricature



## CLAY MODELING AS SELF-EXPRESSION IN PRIMARY GRADES

REGINA TEIGEN

Supervisor of Art, Sioux Falls Public Schools, South Dakota



PROBABLY the most important phase of art in primary grades is free, creative expression of the child's feelings, emotions, ideas, and experiences. Every child can express himself if he starts early enough and is guided by an understanding teacher.

The following is our general theory and procedure. We regard clay as one of our mediums of telling what the child has to say—a medium in which he delights, just as he formerly made mud pies, mounds in sand, or men in snow. They still enjoy modeling animals life-size in snow whenever it comes to us in proper texture and temperature. He likes the feel of clay—soft, pliable, easily controlled—it can be squashed and started all over again.

When the child comes to us in kindergarten, we give him opportunities to experiment in various mediums to satisfy his curiosity. He makes purposeless, spontaneous, unintelligible scrawls in painting and drawing, formless creations in clay or other substitutes. Gradually he gains muscular coordination, skill with his hands; his creations take on form, rhythm, meaning, and he develops self-confidence, attention, and concentration—aids in all schoolwork.

Two facts we keep in mind, first of all: the child must have something he wishes to say and power or skill

enough to say it without too much stumbling and fumbling. As his ideas grow, his skill to express them must grow. A wise teacher knows how to keep this balance of development so self-expression may be a free, joyous process.

I well remember hearing Franz Cizek of Vienna and seeing the individual, truly creative paintings of his school. In his kind, interested manner, as this tall stately teacher moved about among his pupils, he led them to the high level of self-expression they attained by stopping to make a suggestive remark here, a leading, natural question there—thus building up ideas and developing skill in the most effective, natural method. Usually his pupils chose their own subjects, but at certain periods an announced topic with specific directions as to size and character was done by all.

While our environment and setup is very different, we feel that his fundamental theory and procedure can be followed to great advantage.

WHEN we chose Kindness to Animals as a project and clay as the medium, very naturally care of their pets was uppermost in pupils' minds. It was closely related to each child's life and experience and of vital concern to many. Discussions come first to build up ideas, arouse interest, inspiration, imagina-



tion, and give information such as proper shelter, food, play, or recreation for the variety of pets. This developed general participation, for not all children are bursting with ideas and wildly enthusiastic to express them.

Animal stories as related by them were many, funny, and revealing. No coercion was needed. We used both clay and substitute plastic material; modeled single pets in different actions such as eating, playing, sleeping, running for exercise, performing tricks; then modeled them in groups, forming a story. These were often swift creations done in one period.

To improve form, we sometimes grouped animals into geometric classes—those that could be developed from ball-shaped, oval-shaped, or rectangular-shaped lumps of clay. This is done just as fun of doing with exciting results. As modeling proceeded, characteristics naturally were emphasized by remarks and questions—why rabbits' hind legs are longer than front legs; why such difference in tail and ears, etc.

This was an opportune time for introducing good

animal pictures of painting and sculpture selected to fit the occasion—a variety of prints from Landseer's dogs to Wanda Gag's or Clare Newberry's cats were used and fully appreciated.

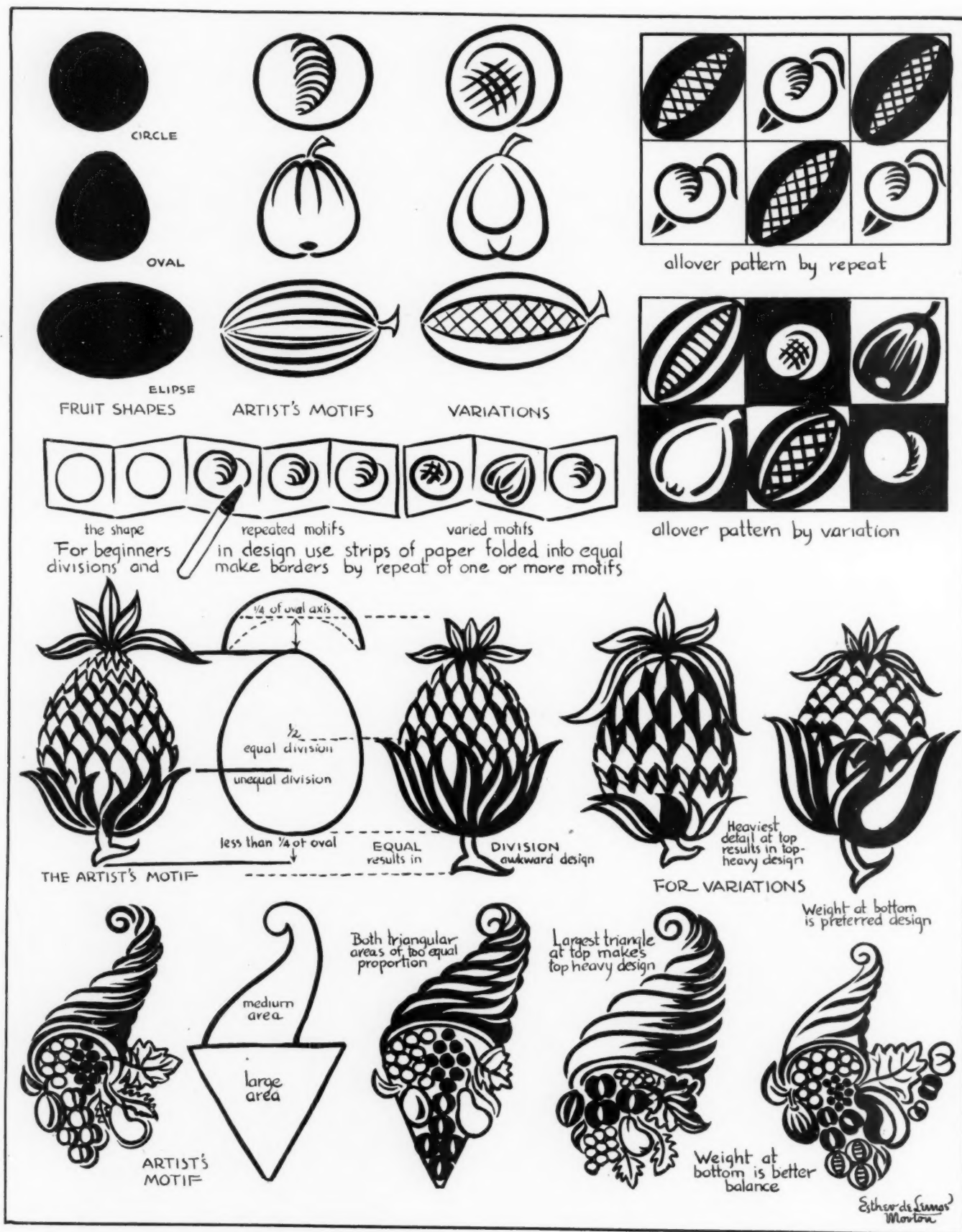
At the end of each period a summing up of results—a comparison of models with children's frank criticism and the teacher's constructive remarks—is both exciting and important.

When models were dry, they were painted in decorative or natural colors with tempera, and later white book lacquer was applied. This was accomplished in various ways, according to the teacher's convenience—in groups or singly at tables, desks, or on the floor. Selected models were exhibited at the Humane Society and teachers' meetings. Finally each child took his model home, carefully wrapped (some made boxes for them), as presents for the family.

As in any art project, results varied, but it was so developed that it gave each child opportunity for choice, for thinking, for creating—each was proud of his work.



In Mexico families are very unified and work is carried on right in the homes. Shown above is the work from a potter's family where the children were left to spontaneously create their own designs



There are many good reproductions of fine originals available now for decorative use. From the motifs of such compositions can be built design study analysis, and appreciation from the most elementary approach to such advanced study as proportion, unity, and balance





An antique painting in the conventional eighteenth-century technique is a good example of naturalistic rendering in still life. Old paintings of this kind can well keynote the theme and color where old furniture is used.



(A Canal Print)

A silk screen print, rich in reds and greens on a brown background, from a modern painting. This contemporary version of a subject similar to that above is presented in two-dimensional decorative forms which become an integrated composition in one plane. The highly decorative results are versatile enough to be used in either an antique or modern setting.



THE CARMEL VALLEY HILLS  
Painted by Marj Doolittle





THE CARMEL VALLEY RANCHO  
Painted by Milton Williams

## METALCRAFT AND JEWELRY

## OLD AND NEW



An antique carved carnelian medallion becomes the setting for this modern turtle set in gold by the craftsmen of a San Francisco firm. The old, carved fret pattern is a most interesting and suitable texture when skillfully combined in the turtle.

An ancient bronze reclining buffalo of the Middle Chow dynasty which shows the ancient scroll or fret motif as an all-over decorative texture which depicts the fur of the animal. The turn of the fret also repeats the anatomical turn of the legs, thus keeping unity in the design.



(Alfred Pillsbury Collection, Minneapolis)





Archimedean spiral, origin of Fret of equal turn

## THE SPIRAL, THE VOLUTE AND FRET IN DESIGN

Esther de Lemos Morton



Predominant dark or light areas make better design proportion



Spiral, origin of the Fret of diminishing turn



Equal line and background areas result in poor design measure



as is proven by use of similar motifs in ancient design



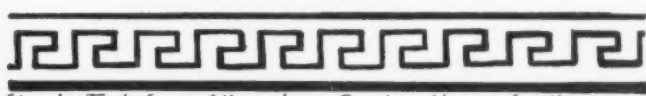
A spiral border from ancient Peruvian pottery of the Nazca region



Volute border from 4th century Greek amphora



Diagonal Fret from old lace of Panama



Simple Fret from 6th century Greek pottery of Attica



Slip painted spiral scroll border from Peruvian pottery



5th century Greek pottery used the Fret grouped



Incised ceramic winged Fret from ancient Peruvian jar  
Winged Fret of Nazca textile of Peru signifies clouds



with other varied geometric motifs



Right Portion of an ancient Kellm fabric of Morro culture, Peru



An American Indian jar from pueblo of Acoma shows an all-over pattern of fine dog hair brush line. Spiral motif signifies whirlwind or promise of rain

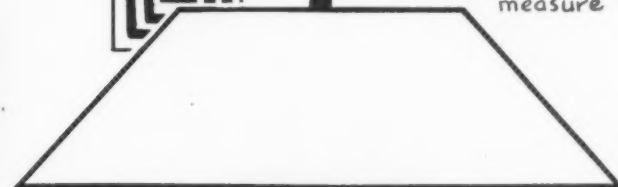


Lamp shade of greater proportion than half of base and less than entire base makes better balance

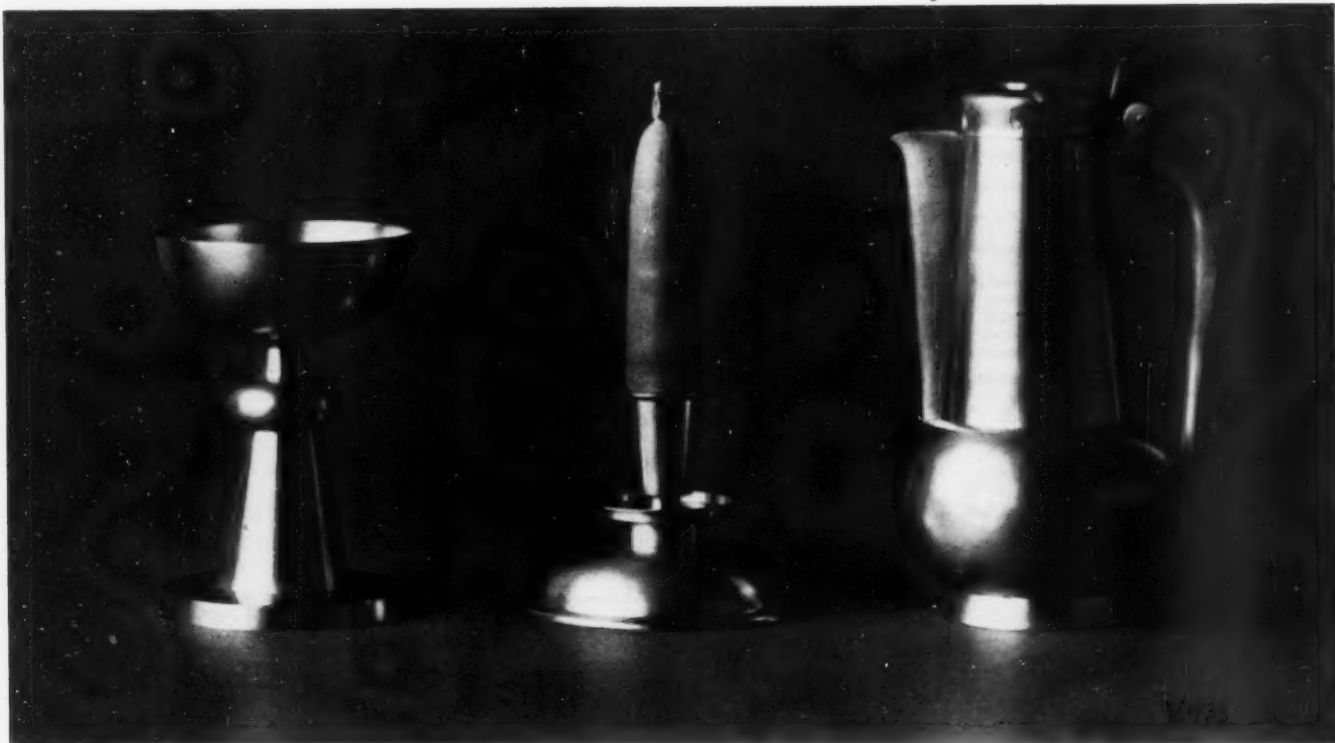
### IN MODERN DESIGN

The principles of design measure still are essential to good design and decoration.

Proportions of lamp at left are too equal. Fret has equal weight of dark and light resulting in entire design of poor measure



Predominant Scroll at bottom keeps lamp from appearing top heavy. Variation of line of design and background keeps design in good measure



A communion goblet, candlestick and pitcher comprise a modern Norwegian set of pewter churchware

## NORWEGIAN PEWTER

SONYA LOFTNESS  
Corte Madera, California

**I**T SEEMS right that Norwegian pewter has today returned to its original purpose—that of being useful. For while there was a period in the early part of this century when pewter in Norway was only a luxury item, Norwegian pewter has almost always been primarily distinguished for its usefulness.

The strange renaissance in the 1920's that elevated pewter in Norway from the role of the necessary to that of the decorative was perhaps not entirely out of character. It served to bring together two things: the high artistic aims of the designers added to the original functional intentions of pewter itself. This can be particularly appreciated when it is understood that pewter production in Norway has been taken over entirely by the metal factories and is now mass-produced.

The oldest pewter extant in Norway that could be called native dates back to the fifteenth century. It consists completely of huge drinking cans with covers. In some cases these old drinking cans were decorated with engravings, but these were usually very simple, and held, for the most part, the zigzag patterns or wavy bands. Antique pewter pieces included, too, such personal effects as buttons and buckles, houseware such as eating and drinking

vessels, and such things as sanitation articles and surgical instruments.

The old pewter pieces were the needful accessories of the common people, for pewter then held no esteem among the rich. When pewter was seen in a great house, it held its rightful place in the servant's kitchen. Those pieces that appeared on the master's table were, if not imported, custom-made, and such cases were so singular that no pewter worker could have found a livelihood in special orders.

In ecclesiastic art, we speak of Norse pewter for the first time in the realm of the decorative. Communion goblets, candlesticks for the altar and baptismal fonts gave the pewter craftsman a rare chance to plagiarize the work of his more artistic colleague, the goldsmith. Yet enough churchwares exist so that it is evident the designers valued the qualities of pewter as an independent artistic medium, too.

A sort of mass production existed as early as the seventeenth century in Norwegian pewter. Earlier, the designer had been compelled to mold each drinking can separately. Now they learned to mold an unlimited number of the same model; the work of the pewter smiths became popular and remunerative,



and in Bergen, the first pewter worker's guild found root.

The smiths of this first guild were for the most part immigrant Danes or Germans, but their works soon assumed a provincial Norwegian stamp. This can be attributed almost wholly to the fact that most of the molds used by the smiths were of metal and very costly. The guilds therefore purchased the models and loaned them out to the workshops. Much of the pewter of that period and even later was consequently strongly similar and the forms remained unchanged. Cans have often been discovered that are entirely alike but have been made nearly one hundred years apart, the artists of both having used the same brass mold.

The Norwegian smiths employed much the same technique as their European colleagues. After the molding itself, the separate parts were soldered together and polished. Many of these separate parts were richly ornamented. Other cases where the decorative held sway appear in the few trays of the seventeenth century, richly engraved with family crests, and in the pewter pieces from Oslo from the late eighteenth century, engraved with flowers and leaves. Here, in many cases, the pewter craftsmen

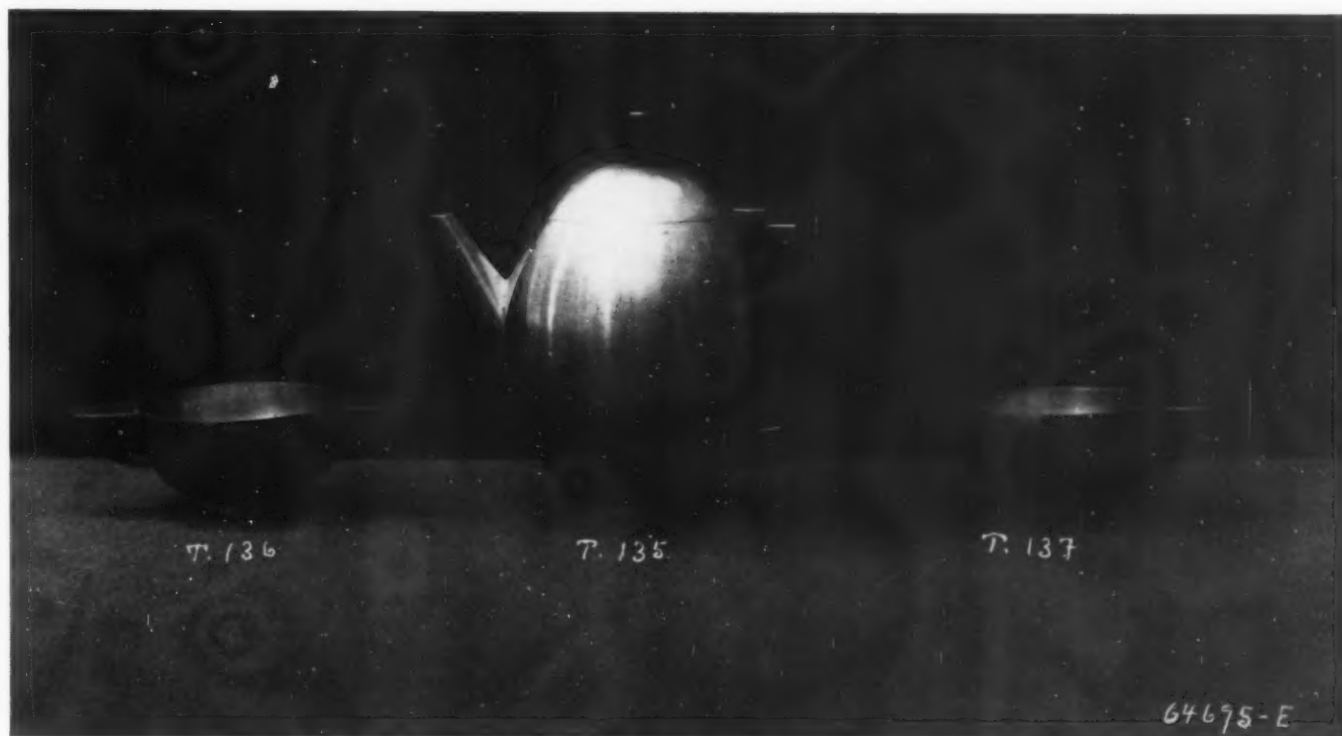
copied in entirety the rich decorations from the silver vessels of the goldsmith.

Competition brought about by the use of glass and ceramics, both cheaper and more hygienic, forced the demise of pewterware in Norway in the nineteenth century. The guild in Bergen dissolved about 1830, and what few smiths remained eked out a living with the sale of buttons and small items to the farmers and in repair work.

When, in the 1920's, work in pewter was again revived in Norway, it was no longer restricted to the useful or necessary. Odly enough, instead of being a poor man's metal, pewter became exclusive with the wealthy as a medium for decorative art.

But now, Norwegian pewter is again functional as it was in times of old, and with it comes the beauty and strength of modern design. This pewter includes plates (a row of pewter plates is a comely decoration in a Norwegian household), bowls, candleholders, bonbon dishes, coffee and tea services.

Norwegian pewter producers today are stressing the development of simple, modern forms. While tin-craft in Norway may be standardized by mass production, it still retains much of the originality and quality one finds in the work of the individual artist.



A Norwegian coffee service in pewter holds to the simple forms of contemporary design





## FRENCH SILVERCRAFT TODAY

PIERRE BURNIER

**T**HROUGH the centuries there has been little change in the equipment of the French silversmith. Most of the handmade silver is still executed in small shops where the tools are simple and intricate techniques are achieved through practice and skill.

As seen in the above illustrations, the preliminary shapes are formed by use of wooden mallets, progressing to the various sizes of pean hammers. The technique of fan folds or flutes is generally used for forming the neck of the object, as it enables the silversmith to keep a uniformity in the shapes and forms of his work. The silver is annealed or heated between hammerings and finally hammered to a polished finish with a leather hammer.

Wire-work features in modern design are usually ornamental, but may be used to strengthen the extremities of a functional piece of silverware. The craftsman still draws the wire through his own plates for the varied shapes and sizes required by his design.



The planisher turns the bowl little by little with regularity, keeping the hammer blows in as even a line as possible. The hammer marks should form a helicoided line from edge to bottom





Ornaments, handles, spouts, or bottoms may be of cast silver and barrels and feet are generally repelled before chiseling.

Chiseling has always played an important part in French silvercraft and is still accomplished with the well-known chiseling and chasing tools. Each artist usually makes his own dies which are held against the silver and stamped with the rapid, short blows of a chasing hammer. Softened angles are worked with blunt rounded tools while the fine, sharp line ornament or beaded edges are the result of sharp or corner angle tools. The two techniques combine in the well-famed art of trace-mates.

Soldering is foremost in importance in fine silverwork. The French expert is well aware of the necessity of using varied alloys, fusible at different temperatures, so as to guard the possibility of melting previous or first solderings.

In jewelry, as illustrated above, the varied uses of metals, wire, pierced work, casting, and soldering are achieved much in the same way, only with the advantage of lighter and finer tools and materials.

In working with metals, the fact still remains that the true craftsman achieves his success with basic equipment, not depending on prefabricated parts or mechanical devices. Skill or techniques and thorough knowledge of design and basic fundamentals are still prerequisite to fine silverwork.



A French craftsman stamps the metal dies of his own design with a French chasing hammer

# COSTUME JEWELRY

MAXINE H. JONES

Art Instructor, Cedar Rapids, Iowa

**A**FTER overhearing enthusiastic admiration for costume jewelry among the students, we decided to try our own creative abilities. We worked with felt, wire, and wallpaper cleaner to give our jewelry variety.

**FELT.** Our initial attempt was felt lapel pins. After some preparatory animal sketching it was soon discovered that our pin patterns didn't look well if they were too realistic.

The next day scraps of felt pieces of old hats, leather scraps, cotton, needles and thread, and very small safety pins were brought from home. We cut around the paper patterns, using two pieces for the body of every animal. Then the legs, ears, and tail were sewed on the front side of the body. Some of the eyes were beads, some were embroidered on, but the favorite of all were sequins, because they are shiny. Then a wad of cotton was put between the two pieces of the body and the animals were sewed together very carefully with the overcast stitch, trying to conceal all the stitches. On the back of the body, a small safety pin was sewn, and the pin was ready to wear.

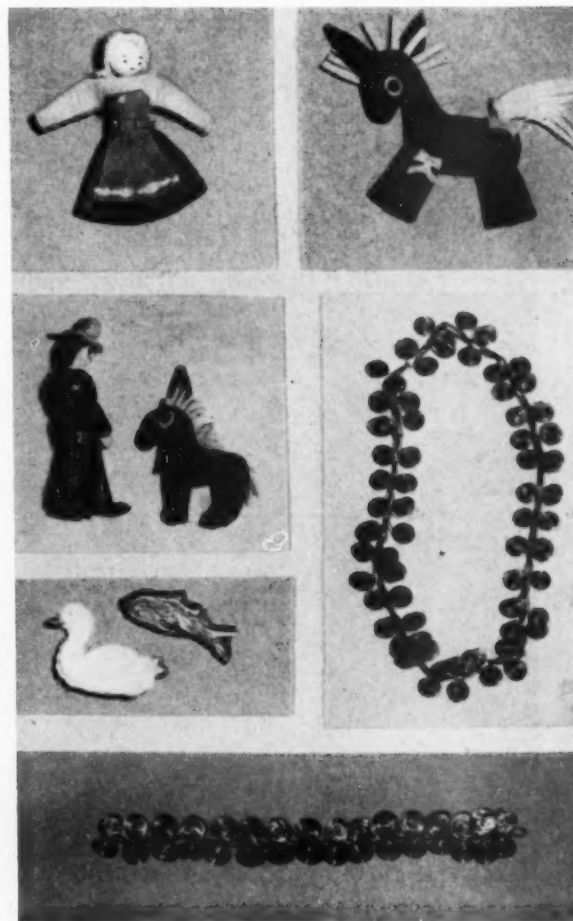
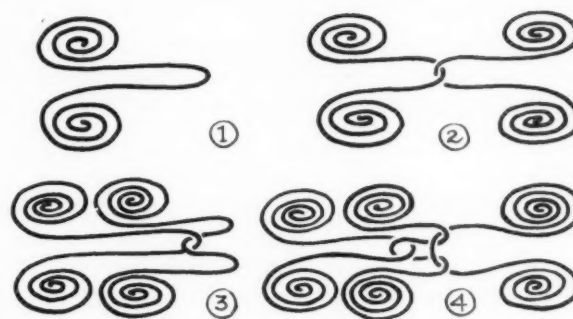
Some of the girls became so enthusiastic when working with felt that they created for themselves some very wearable hats.

**WIRE.** I asked the boys if they had some small pliers at home and if they could find some copper wire. Within two days one corner of the room resembled a section of any city's junk pile.

**W**E began by cutting the wire into five-inch lengths and found about eighteen pieces made a bracelet. If you care to make a hook-and-eye fastener, cut a four-inch length for the eye and a seven-inch length for the hook. Using the five-inch pieces, swirl the ends of the wire until there is left a plain eye of about one inch (Fig. 1). Measure the eighteen eyes to make them even, then slip two eyes together (Fig. 2). Bend the second eye back (Fig. 3), slip the third eye under the second eye (Fig. 4), and bend back. Continue this until you have a bracelet. Clamp the back of your bracelet firmly together so that it can be bent back to make a hook for the fastener. The eye for the fastener must be shorter and should be put in backwards. Your first bracelet is finished.

We used copper wire because it isn't expensive and is easy to twist. If it should tarnish too much while it is being worked on, use fine steel wool to brighten it up again. Dip the whole bracelet into a thin solution of lacquer, or paint it with clear fingernail polish.

(Continued on page 6-a)







Facets are ground upon the gem by holding it to the "cutting" lap at precise angles. After the facets have been cut, they must be polished to give them a lively glitter\*

## THE CUTTING OF GEMS

J. DANIEL WILLEMS, Chicago, Illinois



WHEN a hundred people are asked to name all the gem stones they know, only a few can recall more than ten. And yet, gem stones have been coveted for personal adornment by the human race ever since man first began to recognize color and appreciate beauty. All through the ages man has transformed pieces of rock into brilliant gems by the use of his ingenious brain and his clever hands. Prized more than attractive clothes, gems were guarded with jealousy and the secrets of cutting them were carefully preserved for the knowing few.

Today important new knowledge is available and simpler methods for cutting gems are continuously revealed, so that even the rankest amateur can learn to cut gem stones of many types, granted he has patience, a little facility with the hands, and an enduring love for gems. It probably takes very little more ability to cut a simple cabochon gem than it does to sharpen a pencil properly. The rest is knowledge which can be easily acquired.

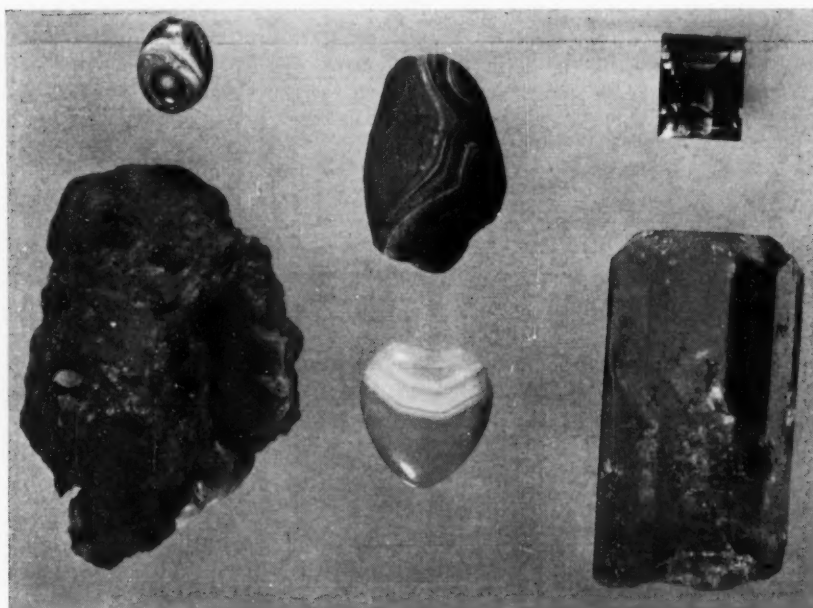
The Indians of our Western States have practiced gem cutting and silversmithing for many generations,

long before this became a hobby with the rest of us who are engaged in the fascinating art of the lapidary. They work with crude methods, a minimum of tools—not more than can be carried in two hands—and their product is attractively beautiful.

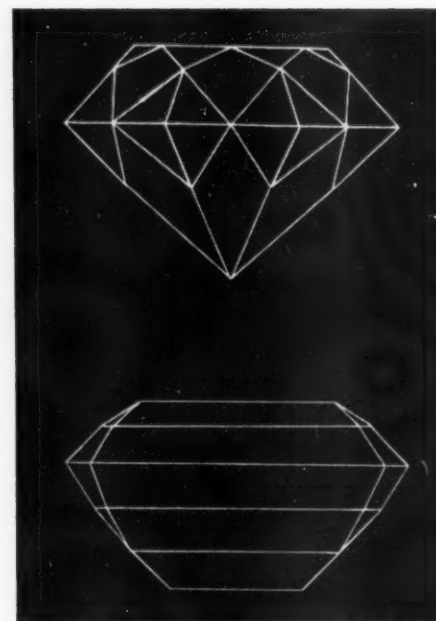
Gem materials can be found in nearly every state of the Union. Many of these materials are relatively unknown, and yet quite abundant. They are suitable for gems when they are hard enough to resist wear sufficiently long to make them enduring; fine grained and compact enough to acquire and retain a smooth, mirror-like polish; and colorful and brilliant enough to reflect all the rays of the spectral colors with sparkle.

Although only a few people can name more than ten gem stones, there are more than 150 which fulfill the requirements necessary to be rated as gems. Many of these rough stones lie on our ocean beaches, especially in the West, ready to be picked up. Others are mixed with the river gravels where they lie exposed at low water level. The mountains, both east and west, are good sources for the collector. The shores of Lake Superior and the regions close by contain a number of exceptionally beautiful, as well as unusual, gem stones. For the more intrepid and the prospector there are mines with shafts and tunnels, as

\*Photo courtesy MANUAL ARTS PRESS, Publishers of GEM CUTTING by the author.



Gems of beautiful pattern and color may be cut from a crude chunk of rock such as variscite, or from a rough pebble, as shown in center, or from natural crystals such as the golden beryl shown on the right



The two basic styles for faceted gems are the round "brilliant" cut (top) and the rectangular "step" cut (bottom). The above is best suited to stones of clear, light colors while that below is considered better for gems of rich and deep hues

well as dumps, where digging and chipping may be productive of fine material. There is even a diamond mine in Arkansas. And who has not heard of the enormous quantities of "jade" recently discovered in our western desert country?

For the collector of gem materials in the field by prospecting, as well as by purchase at mineral supply firms, it is necessary to know the more obvious properties by which gem materials can be recognized easily and quickly. There are many characteristics which will identify a mineral. The obvious ones are the important ones for the amateur or beginner.

Color is most significant. The blue of turquoise, the characteristic green of variscite, the purple of amethyst are easily recognized by anyone with a small amount of experience. Nevertheless, color alone is not enough. This is especially true of white or colorless stones, which are the most difficult of all gems to identify.

**H**ARDNESS is a very valuable property in identification. By a little familiarity with the hardness scale of Mohs, and by carrying a few chips of minerals of known hardness, the hardness test can be at once applied and in many cases the stone identified. A steel knife blade will not scratch a mineral with a hardness above 6; a chip of quartz will not go above 7; and a piece of sapphire has a hardness of 9. With these three many tests which lie in the ranges between 6 and 9 can be made, and identification becomes possible.

Crystal form is important where the material is crystalized as, for instance, tourmaline. A little knowledge of the distinctive shapes of crystals is enormously helpful, as each different variety of

material has its own particular crystal form. Tourmaline crystals are 3-sided; quartz is 6-sided, and so on.

Markings, such as the parallel stripes on agates or the chatoyancy of the moonstone, are readily recognized as identifying properties.

The scientific methods of identification are complicated and therefore not suitable for use by the beginner. But acquaintance with some of the obvious characteristics such as outlined above is necessary.

The story of a gem begins in one of three things: (1) a piece of rock; (2) a pebble; or (3) a crystal. Not just any old chunk of material will do, but if it has the qualities of hardness, durability, and beauty of color or pattern, it may well hold the secret which makes of it a gem when properly treated.

There are two distinct types of gem stones: (1) the cabochon gems and (2) the faceted gems.

Cabochons are those gems with a smooth, convexly rounded top, and a flat base. These are the simplest and easiest gems to produce, and, fortunately, are also the most abundant. They are usually of material which is opaque or translucent. Occasionally clear gem material will also lend itself to this style of cutting, especially when the color is deep, and light is largely lost when passing through—as in the case of a deep red garnet (carbuncle) which can be cut as a cabochon.

**M**ANY of the finest gems are cut in the cabochon style, such as opal, moonstone, jade, carnelian, lapis lazuli, and turquoise. Among the less expensive, but often no less attractive cabochons are agate, jasper, chrysacolla, amazon stone, tiger's-eye, labradorite, malachite, petrified wood, rose quartz, and variscite. This is by no means a complete list.



Cabochons reflect light from their highly polished surface, displaying the beauties of color, pattern, and design.

Faceted gem stones are those which are covered with tiny flat, geometrical facets placed symmetrically all over their surfaces. The top, called the crown, is flat, surrounded by several circles of facets. The lower part, called the pavilion, is deep and pointed and likewise covered with two or more circles, or rows, of facets. The cutting of facets is adapted only to transparent material. Light is not only reflected from the surface of the gem, but also from its interior. It is the light rays which are reflected from within by the pavilion that produce the sparkle and life in a faceted gem.

Diamonds are always cut as faceted stones. Other stones which are best treated that way include the emerald, ruby, sapphire, alexandrite, amethyst, kunzite, zircon, topaz, tourmaline, morganite, golden beryl, hiddenite, crysolite, aquamarine, cairngorm, and many others.

**A**LL gem stones are produced from the rough material by a process known as cutting. This procedure consists of a certain number of steps, to be taken in sequence, but none of them is cutting in the sense that it requires a sharp-bladed instrument.

The cutting of cabochons is quite simple. It requires little skill, and the knack can be acquired in a short time with or without instruction from an experienced cutter.

The first operation is to saw the material into slices about  $\frac{1}{8}$  inch thick. This is in cases where the

material to be cut is in chunks large enough for slicing. When cutting a small pebble which is already about the right size for a cabochon gem, no sawing is necessary. Sawing, or slicing, is done by means of a "diamond saw," which is a steel disk into the edge of which minute diamond particles have been set. In a general way a diamond saw looks and runs like a circular saw in a wood-working shop.

The next operation is grinding. The material to be cut is simply held in the hands and brought into contact with a carborundum grinding wheel. The grinding cuts away the excess material, and it also shapes the stones to the desired form. This may be oval, or round, or rectangular with rounded top, as the cutter's fancy calls for.

After the grinding, the stone is mounted on the end of a round stick, called a dop stick. This is for the purpose of better handling, and more delicate and accurate manipulation of the stone against the wheels in the subsequent operations. Dopping cement, which consists of sealing wax with a little shellac added, is melted in a flame and placed upon the end of the dop stick. Then the stone is placed on the cement. After cooling, the stone is secured to the stick, much like a rubber at the end of a pencil.

**F**OR the fourth operation the dopped stone is taken to another carborundum grinding wheel, which contains more finger grit than the first one. Here the finishing touches are put onto the stone. When the curves of the stone's outline and top are all perfected this operation is finished.

Then the stone is "sanded" to smooth the surface and prepare it for the final operation, which is polish-



The rough material is ground into shape on a silicon-carbide wheel, after which it must be polished to bring out the value of its colors and give it the final brilliance which is the crowning glory of a gem

ing. Sanding is done on a wooden wheel covered with a fine-grained carborundum cloth.

After the top of the cabochon is adequately smoothed all over it is taken to a felt wheel where it is polished. To this wheel is added a polishing agent, usually tin oxide powder mixed with a little water in a small jar, by means of a small paintbrush. The actual polishing is done by the agent, the powder, just as silverware is polished by silver polish. The felt wheel merely forms a convenient way of rubbing the powder over the surface of the stone. In this way a bright, mirror-like surface will result, which is the crowning glory of the gem.

After polishing is complete the dopping cement is again warmed and softened over the flame. The gem is then lifted off and cleaned in alcohol for a few minutes. When it is then dried the true and full beauty will be revealed for the first time.

**T**HE equipment for cutting cabochons is exceedingly simple and not at all expensive. Much of it can be purchased at mail-order houses or hardware stores, and rigged up with a bit of ingenuity by the cutter. A  $\frac{1}{4}$ -horse power electric motor will supply ample power. With such equipment two or three gems can easily be produced in an evening.

It is estimated on good authority that there are around 3000 amateur cabochon cutters in the United States at the present time. New ones are entering the ranks daily. They find their encouragement in two sources: the mineral and lapidary clubs organized in practically every large city, and the various journals for the amateur mineral collector and lapidary. There are also several instruction manuals.

The cutting of faceted gems is a different story. Only a small proportion of cabochon cutters will advance to this, the highest degree of the art and skill of the lapidary. However, there are constantly being invented simplified methods and procedures, as well as tools and devices, which make the cutting of fine faceted gems simpler and easier. The cutter who can invest in one of these faceting devices will not have too much trouble producing one or several styles of facet cuts. The more complicated styles will take more time to learn.

As preliminary practice to learn the art of cutting facets, the cutter should study by cutting facets on potatoes. After cutting about a peck of them, the cutter will be surprised how much progress he can make—and that at a cost so cheap that it is entirely insignificant.

**F**ACET cut gems come in two basic styles: (1) the brilliant cut and (2) the step cut. Each of these styles can be modified and elaborated by the advanced and experienced cutter.

The standard brilliant cut carries 57 facets (sometimes 58) and is round in shape. The widest portion,

called the girdle, is at the middle. The large, flat place on top (the largest facet) is called the table; opposite the table is the point, or culet. These same terms are used for step-cut gems.

The brilliant cut is adapted to all clear, colorless gem stones and, above all, the diamond. This style produces greater brilliance and sparkle in such a gem than any other style of cut. The facets are all triangular or diamond-shaped, and they encircle the gem in succeeding rows above and below the girdle. The angles of the facets are so placed that light rays entering the gem from above by way of the crown will be bounced back out of the gem, in the manner of making a U-turn, and will emerge out of the table. It is this that is seen by the eye as that beautiful sparkle that forms the stone's main attraction.

**T**HE standard step cut is also sometimes called the trap cut, or the emerald cut. There the girdle is not a round circle, but consists of the straight lines of a rectangle. The facets are rectangular and are placed in the manner of steps—hence the name. They are much fewer in number than those on the brilliant.

The step cut is best adapted to gem stones or pronounced color, such as the emerald. This style will play up the color in a gem, rather than the sparkle. However, a great deal of light play can be cut into a stone of medium intensity of color, along with fine color preservation, by proper placing of the step facets.

Before facets are cut on a piece of valuable material it must be subjected to study of its exterior as well as its entire interior. The stone is clear, therefore, with a magnifying lens the cutter will be able to detect flaws and imperfections quite easily. The size and shape and proportions of the rough material are also taken into consideration so that the largest possible gem will be obtained. After consideration of all these features a phantom gem should appear in the cutter's mind as he looks at the crystal to be cut—the gem in its final finished state.

After this the cutting of the stone begins. The first operation is sawing the crystal to obtain the part that is to be cut. If the crystal is quite small, no sawing will be necessary.

Next the stone is ground into the rough shape laid out for it, on the same grinding wheel which was described for cabochon grinding.

The stone has now been crudely roughed into shape. The first facet to be cut will be the guide, the cornerstone, so to speak, for all the others. This is the table. So the stone is placed upon a horizontal "diamond" cutting wheel, called a lap. The lap is a bronze disk, into the surface of which diamond dust has been imbedded. On this lap the table of the gem is cut into its correct position and size.

(Continued on page 6-a)





A view of the finished kiln looking into the firebox, which has been stacked for firing

## AN EASILY BUILT ELECTRIC POTTERY KILN

WALTER DONALD KRING

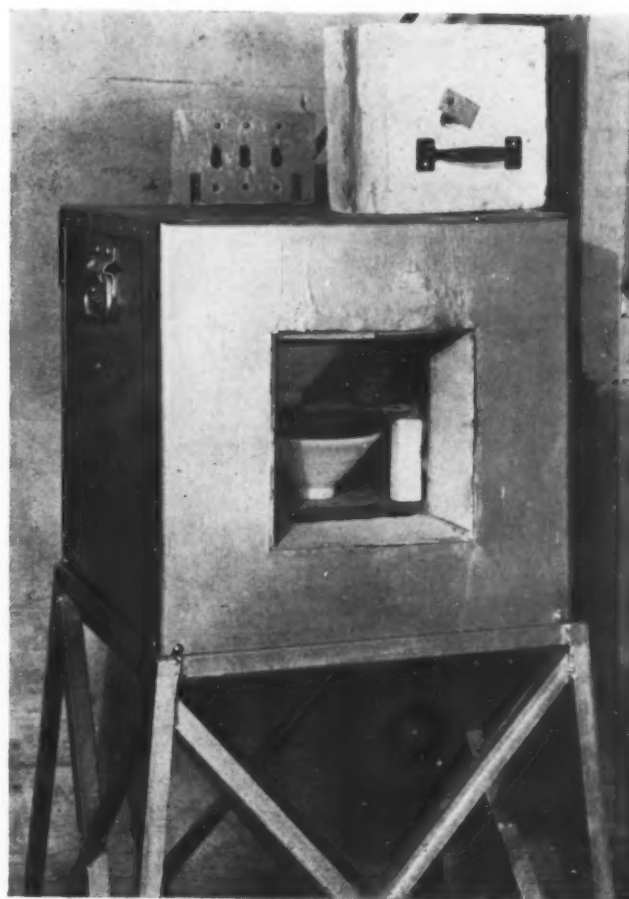
**M**ANY people who would like to make pottery find that when they get ready to fire the pieces they either have to have the firing done by someone else or pay a great deal of money for a kiln. The aim of this article is to give instructions for building a small pottery kiln so that the average person who is handy with tools and who knows little or nothing about electricity or heat can build a satisfactory and inexpensive electric kiln. The kiln described here can be built for something under \$30, and its size is adequate for most amateur firing. The inside dimensions of the firing chamber make a 9-inch cube. It will fire in three or four hours, costing about 25 cents for a single firing. If anything goes wrong there is little danger of a fire because the fuse will simply blow. Replacements costs are low. My own kiln has had something over 200 firings to cone 04 (1925° F.) with a replacement cost of about \$3.

I would suggest that you build the steel shell first. This is built of thin black sheet iron cut to the shapes illustrated in the diagram and bent along the dotted

lines. It is put together with sheet-metal screws. It is a good idea to attach the handles and also to attach the legs, which can be fashioned from old bed rails. These are cut to the desired height and fastened to the corners with sheet-metal screws. These make very adequate legs although you can have a welder make legs such as are illustrated in the photograph.

Next you may make the element holders from six insulating bricks. Four slots are cut in each of these bricks on the 4½- by 9-inch face, each slot being ¼ inch wide and ⅜ inch deep. These slots may be simply made with a hand metal file or with a circular saw or with an abrasive cut-off wheel on a circular saw. The ends of the slots are then rounded with a file so that each two bricks will make a continuous coil as illustrated in the diagram.

**N**OW you can start laying the bricks in the steel shell. Lay down first one layer 2½ inches deep. The bricks can be easily cut to shape with a hacksaw and filed with a rasp. Put the bricks together with any high temperature cement, preferably the ready mixed moist cement, but any high temperature cement will do. Now on top of the first layer of bricks lay one pair of the slotted bricks exactly in the center of the kiln with the slots running from front to back. Then fill in around them so that the whole floor is 5 inches deep. When laying in the bricks it is well to drill



Another view of the open kiln; and the door or plug, upon which is mounted a metal handle, is sitting atop the kiln. Switch panel shows at back



holes to the back of the kiln to take the element lead wires. These holes should be about  $\frac{1}{4}$  inch in diameter. Put in the side element bricks and fill in to the edge of the steel shell.

**T**HE top two layers of bricks are now laid completing the brickwork. The door is filled in so that there is a 9-inch square opening left for the door. The sheet-metal top can then be screwed on. The door itself is of the plug type and is made of four insulating bricks cemented together to make a plug 9 inches square and 5 inches deep. Handles can be attached if you desire them. Bolts  $4\frac{1}{2}$  inches long will do the job. The heads should be imbedded in the bricks and the holes plugged with cement. These bolts also help to hold the door together.

Now for the electrical connections. The elements are made of three 800-watt coils. These are the right size, more wattage is unnecessary and less wattage would be inadequate. The two ends of each coil are straightened out for 14 inches, doubled back and lightly twisted for strength. Then the whole coil is stretched out to about 60 inches and stretched into place in the slotted bricks.

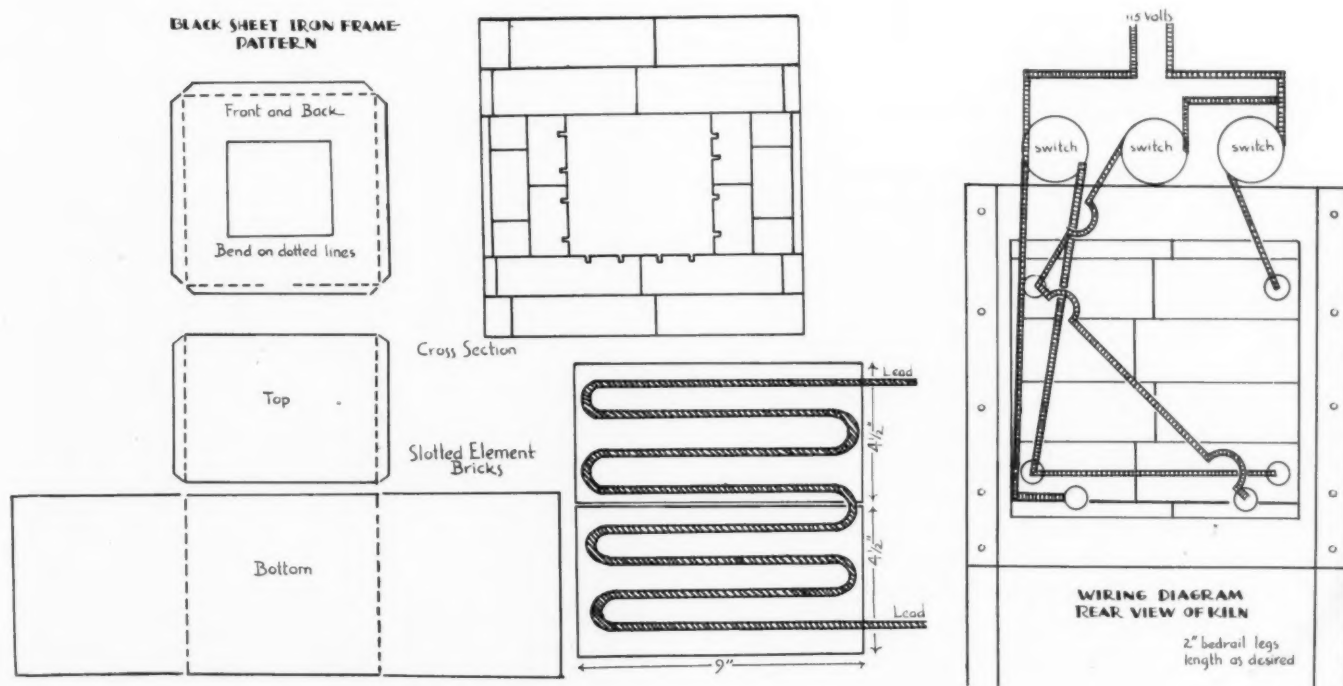
Heavy wire should be used to connect the coils as shown in the wiring diagram. Small bolts are used to attach the nichrome coils to the connecting wires. The switches may be either of the snap type or open throw type. They should be mounted in a convenient place on a bakelite panel or other insulating sub-

stance. This kiln will use approximately 21 amperes at 115 volts. It should be put on a separate electrical circuit, if possible, with its own off-on switch and fused with 25-ampere fuses. Nothing else should be used on the same lighting circuit while the kiln is firing. This is about the limit in size for a pottery kiln that can be used in the ordinary home without special wiring.

The firing should always be done with a silicon-carbide slab on the floor of the kiln to protect the bottom elements. These slabs, which may also be used for shelves, are  $8\frac{3}{4}$  inches square by  $\frac{1}{2}$  inch thick and may be obtained from ceramic supply companies. Switch 1 puts all of the coils in series and gives a warming, gentle heat. With switches 1 and 2 on, the bottom coil is on. With all of the switches on, all three coils are on. Firing should be slow and gentle, especially for bisque firing. Shelf supports may be cut from the scraps of insulating bricks.

#### BILL OF MATERIALS

- Sheet metal cut to fit
- 4 bed rails for legs
- Sheet-metal screws
- Approximately 70 No. 20 (2000 F.) insulating bricks
- 3—800-watt nichrome stove coils
- 3 switches
- 4 silicon-carbide shelves  $8\frac{3}{4}$  inches square by  $\frac{1}{2}$  inch thick
- Wire for lead and electrical connections



DEVELOPING TALENT WITH

# GENERAL'S *Drawing Pencils*

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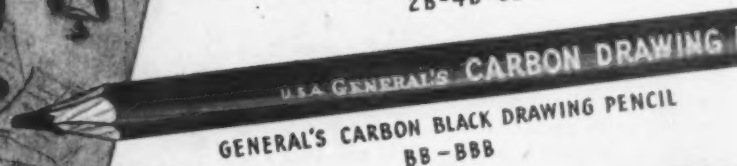
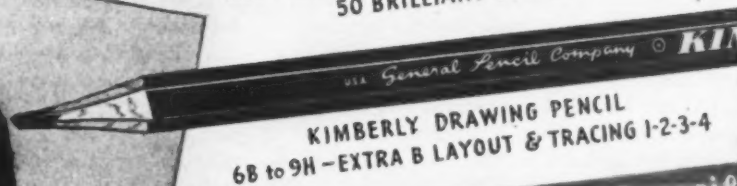
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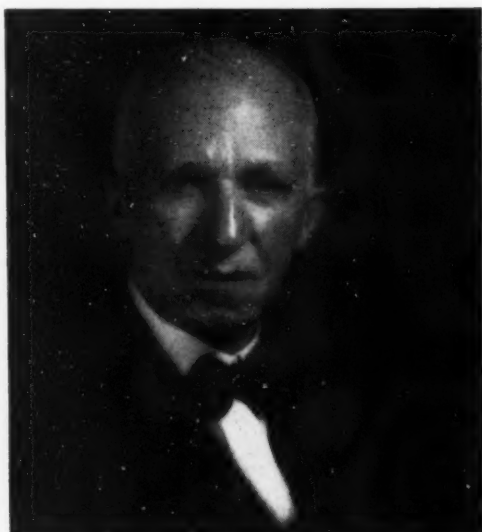
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## In Memory of ALLISTON GREENE

The death of Alliston Greene on June 24, 1948 marked the end of a distinguished career for the managing editor of *School Arts Magazine*. For nearly half a century Mr. Greene was actively associated with the magazine. Starting as advertising manager in 1903, he later assumed the duties of managing editor, and continued in this capacity until his death.

Many of you have met Mr. Greene and will remember his ready smile and eager interest at the Art Association Conventions over a period of many years. We in *School Arts* will miss a great personality, proud of his skill as a printer, who devoted so much of his fruitful life in useful service to others.

### THE CUTTING OF GEMS

(Continued from page 28)

After cutting the table, its surface is rough with many scratches, presenting an appearance much like that of frosted glass. This is then smoothed and eventually polished by holding the table to the polishing wheel.

The polishing wheel also runs horizontally. It consists of an amalgam of tin and lead. To this wheel there must be added a polishing powder, just as described in the polishing of cabochons. The powder is usually a fine grade of silica, called tripoli. By holding the gem with the table flat upon the wheel, the appearance of the gem changes completely when it is polished. It loses the scratches and the frosted-glass appearance and becomes shiny, bright, and smooth. The color also becomes clear.

WHEN the table, the largest facet, has been completely cut and polished, the real job of placing the facets at their proper angles begins. For this purpose the stone is dopped, much as described for cabochons. The dop, however, does not consist of a simple stick, but of a device marked with figures indicating the degrees of the angles. With this device, a modern invention which simplifies cutting enormously, the stone is held in the correct position and needs only to be properly placed on the bronze wheel. This is done by placing the upper end of the device into a grooved block, called a jamb peg, which stands close by and alongside of the lap. The device then falls diagonally from the groove down to the wheel at a predetermined angle. A groove higher on the peg will produce a lower angle; and a lower groove, a steeper angle. Thus, by placing the device into the proper groove, the proper angle can be cut on the stone. When the first facet is cut, the device is turned around its axis until the correct figure for the position of the next facet is in place—and the cutting of the second facet goes on. Thus, when once the basic principles of the facets are understood, the actual cutting becomes quite simple. In this way, one by one, the 33 facets on the crown are cut.

Then comes the polishing of these same facets. This is done simply by taking the stone, mounted in the faceting device, to the polishing wheel and there going all over each and every facet in the

same way until all are polished. This finishes the crown of the gem, but it is only a little more than half done.

The stone must then be removed from the faceting device and turned over, the crown down and the pavilion up, so that the pavilion can be cut and polished. To describe this would be unnecessary repetition. The process is exactly the same in principle as described for the crown.

When finally the cutting and polishing are all done there comes the tensest moment of anticipation and suspense—will the gem be free from flaws, have maximum brilliance, show its best color? With careful fingers the cutter removes the gem from the cement, submits it to the cleaning solution, and dries it. Then he presents its facets to the light for the crucial test. If it is properly cut there will blaze forth a bit of the essence of the sun itself, an object of beauty to delight the admiring eye. This is indeed a thrill.

### COSTUME JEWELRY

(Continued from page 24)

Some pieces of jewelry we made from aluminum wire, some from copper wire washed with aluminum. This wire came from meat-packing houses and we found it didn't tarnish. If you want some lovely jewelry, use silver wire.

After we began twisting wire, all kinds of ideas evolved. Necklaces were wonderful because they fit the neck so perfectly. Earrings had all sorts of possibilities. Some of the backs were soldered, but some cements work just as well and save a lot of bother. Pins were made from the whirls and then someone started bending the wire into names. The pin fastener on the back of the pins was made from wire by filing the end of the wire to a very sharp point.

WALLPAPER CLEANER. We bought a can of wallpaper cleaner for twenty-nine cents. All sorts of animals, flowers, fruit, and even people were modeled leaving one side of each flat so pins and earring backs could easily be glued onto them. These we put on pieces of cardboard with waxpaper over the cardboard so the wallpaper cleaner wouldn't stick. From day to day we turned the articles we modeled so that they would dry evenly. It took about four days for them to harden. Smooth surfaces were made more

smooth by slicking them over with water. We used toothpicks to ruff up the surfaces to make lamb's wool and the flower centers.

All kinds of paint, show card, oil, and even radiator gilt, was used. After the pin and earring backs were glued on, we dipped the whole article in a thin solution of lacquer so that there wouldn't be any chance of the paint rubbing off on anything.

Some children made beads which were very successful because the wallpaper cleaner is so very light in weight after it is dry.

The girls made buttons for their dresses, wore them, and were very pleased with themselves.

Each member of a class of forty had three or four pieces of jewelry that could be used for gifts for friends when the occasion arose.

### WATCH FOR YOUR COPY OF SCHOOL ARTS FOR OCTOBER

Holiday projects that give you ideas and suggestions for the whole school year will feature the next issue of *SCHOOL ARTS*.

There will be a rich store of illustrated source material to start your imagination going at top speed, plus complete projects and ideas for your classes, written by teachers like yourself. Many of the illustrated articles will show you, step by step, how holiday projects have been worked out by students at various grade levels. When your classes need material for projects on Christmas, Valentine's Day, Easter, Halloween, or Thanksgiving, your copy of *SCHOOL ARTS* for October will help you. In addition you will find ideas for making all kinds of holiday subjects in the article on the uses of plaster of Paris and papier-mâché.

And about our cover design for October—notice how the artist has brought out the Red Feather Community Chest idea in the holiday bird. It's sure to stimulate your students' imagination!

If you would like an extra copy of this Holiday "idea" issue (to be sure you have a copy handy throughout the year), just send us fifty cents and we will mail it to you.

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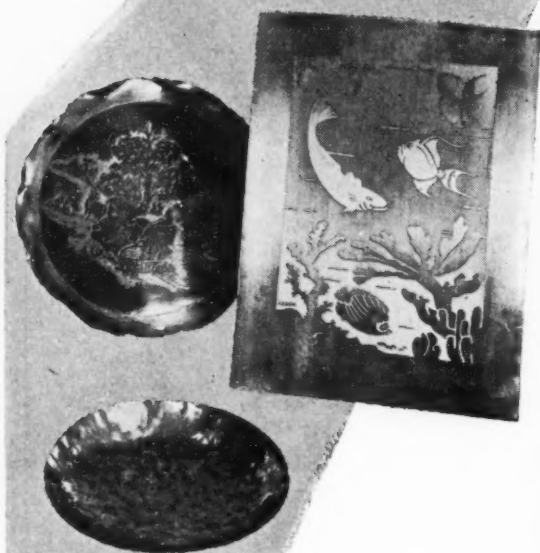
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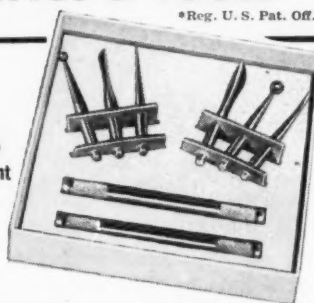
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(Continued from page 2-a)

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### A TREASURY OF AMERICAN BOOK ILLUSTRATION—Henry C. Pitz

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## ITEMS of INTEREST

Here are the latest happenings in the Art Education field. The *Items of Interest* Editor brings you news of materials and equipment, personalities and events in the world of Art and Crafts. Read this column regularly . . . it is written especially for you.

**THE MILTON BRADLEY COMPANY** of Springfield, Mass., announces that their "America the Beautiful" exhibition of prize-winning child crayon art can be obtained for exhibition by educational divisions of museums, teacher's training schools, or other educational institutions. Two exhibitions are available—the Blue exhibition (Continued on page 9-a)

School Arts, September 1948



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(Continued from page 8-a)

tion is composed of 32 drawings mounted on 16 boards approximately three feet by four feet, and the Black exhibition is composed of 40 drawings mounted on 20 boards of similar size. Reviewers pay only the shipping charges to the next exhibition site. For further information or scheduling, write to James J. Shea, President, Milton Bradley Company, Springfield 2, Mass.

**AN EXCITING NEW CRAFT** is brought to our attention by the O-P Craft Company, Inc., of Sandusky, Ohio. Basswood bottle stoppers, size  $1\frac{1}{8}$ " x  $1\frac{1}{2}$ " with a long, tapered cork may be carved to any shape or easily decorated. The decorative possibilities of these inexpensive and attractive objects is as limitless as your imagination. Details and prices may be obtained by writing to The O-P Craft Company, Inc., Sandusky, Ohio.

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need for leathercraft, from instructive books to modeling tools. Send your request for Leathercraft, Larson catalog, to Items of Interest Editor, 189 Printers Bldg., Worcester 8, Mass., before October 31, 1948. Enclose 3 cents to cover cost of forwarding your request.

**A COLORFUL CATALOG FOR ART TEACHERS** has been published by the American Crayon Company. Truly a delight to the eye as well as a detailed presentation of available materials, this catalog is available to art teachers who send requests, written on their school stationery. On the 32 pages of this book you'll find water colors, crayons, textile paint colors, oil sticks, dry paints, poster pastels, all illustrated in their soft brilliance, as well as carving materials, stencil paper, and all the other materials and equipment. Send your request for the American Crayon Catalog number 343, written on your school stationery, to Items of Interest Editor, 189 Printers Bldg., Worcester 8, Mass., before October 31, 1948.

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(Continued on page 10-a)

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(Continued from page 9-a)

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## NEW BOOKS for the Art Teacher

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Book Review Editor, School Arts Magazine  
Box 2080, Stanford, California

**PENCIL PICTURES**, by Theodore Kautzy, published by Reinhold Publishing Corporation, 320 West 42nd Street, New York 18, N. Y. Priced at \$5.00, this book has 90 pages and is 9" x 12" in size.

Theodore Kautzy, master of pencil technique, is author of "PENCIL PICTURES." By analysis of the fine examples of his own pencil drawings and discussion of the basic rules of good composition, Kautzy attempts to free the aspiring artists from limitations of reproductive art, to give them command over arrangement of pattern and line—light and shadow, so they will know what to do with the subject matter provided by nature.

(Continued on page 12-a)

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See the author's article, *The Cutting of Gems*, on page 25 of this issue.

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## THE UNFOLDING OF ARTISTIC ACTIVITY.

by Henry Schaefer-Simmern, published by the University of California Press, Berkeley 4, California. This book is 8" x 11" in size with 201 pages, priced at \$5.00.

Professor Schaefer-Simmern believes that artistic activity is natural to man and that it can be developed in accordance with awakening and strengthening of one's own critical judgment. This theory he has tested in a program in art education carried on with business and professional people of all ages and of all levels, and now reports his findings in his book "THE UNFOLDING OF ARTISTIC ACTIVITY."

In this book Professor Schaefer-Simmern illustrates the progress of his theory with photographs of actual drawings, paintings, sculpture, textile designs, woodcarving, and tiles showing the development and progress of his students' ability, proving that under proper guidance even students of low I.Q.'s can produce amazing results in artistic development.

## ILLUSTRATORS OF CHILDREN'S BOOKS

The Horn Book, Inc., 248 Boylston Street, Boston 16, Mass., has recently presented for a discriminating public, "ILLUSTRATIONS OF CHILDREN'S BOOKS," which was compiled by Bertha E. Mahoney, Louise Payson Latimer and Beulah Folmsbee. This book is 9" x 11", has 527 pages, priced at \$15.00.

One of the aims of this book in discussing illustrators of the past two centuries and their work is to increase the reader's pleasure in all books, and to make him discerning in his appreciation. Children's books are messengers that

go beyond mountains and oceans, helping to unite the world—and their illustrators are of vast importance.

Representative works of the artists of today and long ago accompany the interesting text. A section gives short biographies of some 300 living illustrators, and for those who wish to make a more extensive study of this fascinating subject, a comprehensive bibliography of illustrators and authors is also included.

**GEM CUTTING**, by J. Daniel Willems, is published by The Manual Arts Press, Peoria, Illinois, and is priced at \$3.50. 224 pages, 6 by 9 inches, with 85 illustrations—mostly careful diagrams of methods.

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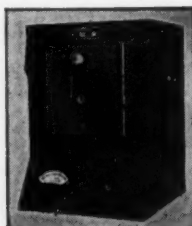
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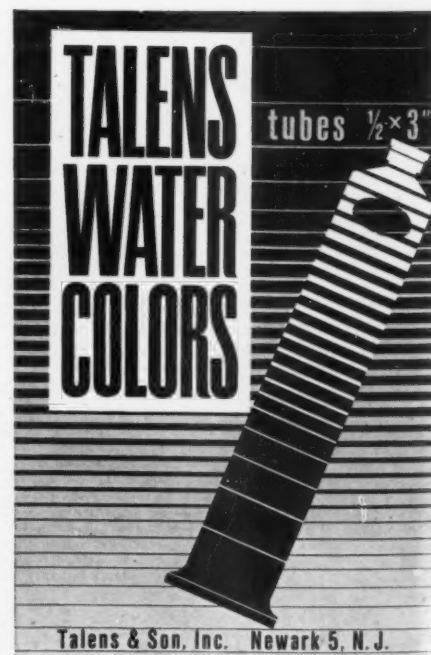
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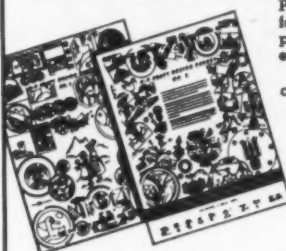
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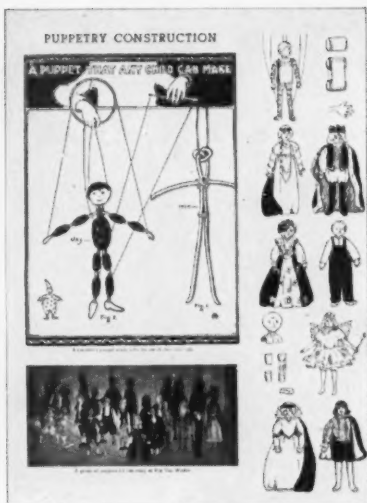
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